

JPRS 80970

3 June 1982

# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2276



FOREIGN BROADCAST INFORMATION SERVICE

#### NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [ ] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

#### PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

3 June 1982

# EAST EUROPE REPORT

## ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2276

### CONTENTS

#### INTERNATIONAL AFFAIRS

- East-West Trade Development, Dangers of Technology Transfer Examined  
(Wolfgang Grosse; DIE WELT, 17 Apr 82) ..... 1

#### ALBANIA

- Importance of Representation at Foreign Trade Fairs  
(BASHKIMI, 6 May 82; ZERI I POPULLIT, 18 May 82) ..... 8

Good Quality Exhibits, on Time  
Comment on Pavillion at Paris Fair, by Sadri Rrahmani

#### BULGARIA

- Minister Dwells on Future Development of Metallurgy  
(Todor Bozhinov; RABOTNICHESKO DELO, 27 Apr 82) ..... 10

#### GERMAN DEMOCRATIC REPUBLIC

- Robotron Combine Sets Production, Savings Goals for 1985  
(NEUES DEUTSCHLAND, 8 Dec 81) ..... 14

- Combine Develops Center for Hybrid Circuit Production  
(Heiner Pachmann; DIE WIRTSCHAFT, Dec 81) ..... 18

#### HUNGARY

- New Proposals to Alter Hungary's Economic Order  
(Laszlo Antal; FIGYELO, 14 Apr 82) ..... 21

- Situation, Experiences of New Forms of Business Operations Discussed  
(KERESKEDELMI ERTESITO, 6 Apr 82) ..... 27

- Official Interviewed on Energy Management Problems  
(Gyula Czipper; NEPHADSEREG, 10 Apr 82) ..... 33

Problems of Increasing Entrepreneurship Analyzed (Kamilla Lanyi; KULGAZDASAG, No 1, 1982) .....	38
MAV Director Discusses Railway Transportation Policy (Zoltan Szucs; KOZLEKEDESTUDOMANYI SZEMLE, Mar 82) .....	49
Categories of Agricultural Cooperative Studied (Ervin Zsuffa; TARSADALMI SZEMLE, Apr 82) .....	57

#### POLAND

First Quarter Production Statistics Published (ZYCIE GOSPODARCZE, 25 Apr 82) .....	76
Initial Assessment of Economic Reform Reported (Janusz Kotarski; GLOS ROBOTNICZY, 2-4 Apr 82) .....	81
Changes in 1982 Socioeconomic Plan Reported (Jan Guz; IDEOLOGIA i POLITYKA, Apr 82) .....	83
Rate of Unused Production Capacity Reported (Bogdan Wyznikiewicz and Habilitatus Leszek Zienkowski; WIADOMOSCI STATYSTYCZNE, Mar 82) .....	85
Economic Contradictions in Production Indicated (SLOWO POWSZECHNE, 7-9 May 82) .....	88
Citizens' Complaints, Grievances to Parliament Tripled (Eugenia Kemparowa Interview; SLOWO POWSZECHNE, 10 May 82) ...	90
Construction of Belchatow Mining, Power Industry Complex Described (Anna Niznik; CZASOPISMO GEOGRAFICZNE, Jul-Sep 81) .....	93

#### ROMANIA

Better Use of Private Farm Potential Urged (Mircea Bota; REVISTA ECONOMICA, 16 Apr 82) .....	105
---	-----

#### YUGOSLAVIA

Law Provides no Incentives for Foreign Investment (Milan R. Kovacevic; EKONOMSKA POLITIKA, 26 Apr 82) .....	110
Farmers Note Problems in Cooperating with Socialized Sector (Djura Djukic; PRIVREDNI PREGLED, 28 Apr 82) .....	115
Investment Expenditures in Serbia, 1981 (V. Subotic; PRIVREDNI PREGLED, 27 Apr 82) .....	118
Possibilities, Status of Oil Recycling Discussed (Nevenka Adler, et al; NAFTA, Dec 81) .....	122



EAST-WEST TRADE DEVELOPMENT, DANGERS OF TECHNOLOGY TRANSFER EXAMINED

Bonn DIE WELT in German 17 Apr 82 p 6

[Article by Wolfgang Grosse: "Trade With the East, Technology Transfer and Western Security Policy." This is the first article in a series on this subject. Subsequent articles, if found relevant, will be translated as they become available and published in forthcoming JPRS issues of this series]

[Text] Trade with the Eastern block in 1982 operates between the poles of East-West confrontation and cooperation, foreign trade and national security interests. The Soviet's unchecked armaments buildup and expansionism is matched by the economic decline of the Soviet block. Without the infusion of Western technology, the Soviets could not continue to sustain their massive production of armaments. This field of tension is explored in the series of articles beginning today.

After nearly 2 decades of a Western policy of coexistence with the countries of the Eastern block, we now find ourselves entering a period of confusion and uncertainty. In Western Europe, and particularly in the Federal Republic, many people are asking: is the policy of detente finished and are we headed for a new Cold War? The policy of detente offered scant occasion for cheer, not to mention euphoria. On the contrary: we are now experiencing, and not just since the Helsinki conference on Security and Cooperation in Europe, an inexorable expansion of Soviet armaments and an expansionist thrust accompanied by a breakdown of Eastern European economies that seem headed for bankruptcy.

The present and future state of the East-West relationship is linked to the multiple dimensions of these problems. To anticipate for a moment: in light of the nuclear deterrence capabilities of both sides, there is no alternative to peaceful coexistence. Yet any realistic detente concept cannot nor should not limit itself to seeking to resolve these problems of the East-West relationship psychologically or in terms of an improved atmosphere. Such a concept of detente prefers "climate" to substance. A vague "detente policy," not subject to constant examination of its substance, boils down here to the superficial smoothness of contacts with East European representatives from the party and the government. This version of "detente"--exemplified by

the Federal Government--turns into both the promise and the justification of political complacency and the jet-tourism of Ostpolitik.

A constructive Western policy of detente must orient itself instead to the Soviet concept of peaceful coexistence. In so doing, it has to consider that according to Soviet doctrine, the competition of the two differing ideological and political systems is inevitable. The West can only draw one conclusion: we cannot choose between cooperation and competition, but only between two forms of competition.

#### Mutual Dependencies and Linkages

The problems of trade with the East are to be found in the context between East-West confrontation and cooperation, foreign trade and security interests. It is there that they receive their impulses or constraints.

There is no doubt that for the West and for the Federal Republic in particular, trade with the East functions as a kind of "transmission belt" for current detente policy concepts. These strategies all have one common denominator: they are intended to create mutual dependencies and linkages with the West. The Soviet Union and its satellites are to be entwined in these linkages with as many fine threads as the dwarves used to tie up Gulliver.

First: It is not just since the Soviet invasion of Afghanistan and the military dictatorship in Poland that it has become questionable whether the Soviet Union can actually be tied up in these fine threads. History teaches us that totalitarian governments can, when the moment appears ripe, free themselves from such dependencies, even at the cost of great sacrifice.

Second: Among various Western governments the conviction was and still is widespread, that an increase in the level of trade with Eastern Europe is identical with an improvement in East-West relationships. Thus trade with the East is given an undeservedly high symbolic value by the governments and public opinion of Western Europe. It is no secret that the West has sought to gain the East's good will on other issues by trade concessions, or at least to reduce political pressures. How little return there is from such accommodations can be seen in the Soviet arms buildup and its expansive behavior in the Third World or in the intransigence of the "GDR" in its dealings with the Federal Republic despite the more than generous terms for inner-German trade.

Third: In the nearly 20 years in which Western Ostpolitik has been marked by its detente policy, the internal structure of the countries of the Eastern block has not substantially moderated--in the sense of ideological liberalization. On the contrary, the volume and compensation strategies of trade with the East have led to a substantial reduction of the standard of living for the peoples of Eastern Europe and thereby increased the internal pressures of these systems. The question must be asked, whether the West should help stabilize the economically incompetent communist systems in the light of their inevitable internal political conflicts? Not only in Poland, but in the whole of Eastern Europe, the political and economic trends pose

a threat to peace. A Polish episcopal letter calls the cause of this trend by name: It is not the demand for more freedom that endangers internal and external peace, but the refusal to grant freedom. The denial of freedom is injustice.

#### Characterized by Guarantees and Credits

Fourth: The natural gas pipeline deal with the Soviet Unions should be reexamined if only for foreign policy reasons. Are we not building another "Holy Gas Alliance" over the heads of the other Eastern Europeans with this politically and economically absurd deal? Metternich, Hitler and Stalin send their greetings. It is not ideology but Soviet raw materials and energy deliveries that today are the real instruments of that empire's pressures and linkages.

Fifth: In East-West trade it is not normal transactions--with the exception of strategic materials--that are decisive. Taken individually they primarily reflect the interest of Western enterprises and interests--those of the U.S. farmer, of the German steel or machine tool industry, et al. If individual concerns and state bureaucracies try to do business where an opportunity for it exists, that is only natural and in principle unproblematic. Much more significant, however, are the conditions under which trade with the East takes place. Apart from luxury items for communist functionaries, trade with the East is characterized by attractive credits and export guarantees. One of the reasons for this phenomenon is certainly internal Western competition on the markets of the East. The socialist countries, as a result of their foreign trade monopolies, are in an especially favorable position and can effectively play off Western companies and governments against each other. That this system has worked successfully for the Eastern block is seen from the billions extended in credits to these heavily indebted countries (total at the end of 1981: 184 billion marks). In light of the population's refusal to be productive, faulty planning and the exaggerated claims of communist economic functionaries, all of which is inherent to their system, the remediation of Eastern economies does not belong to the functions of the West.

In terms of longer range policy, the idea is gaining ground of whether Western relationships, economic and technological, ought in the future really to be determined by commercial interests. Have not Western banks grown even more "interdependent" than the East because of the East's heavy indebtedness?

Because of the East's ever more precarious economic situation it appears that what is more urgent than individual steps or sanctions is that the governments and the general public of the allied countries take a new look at the whole issue of Western policy toward the East. Since the Federal Government upholds a vague East-West trade concept and, for well known reasons, wants to avoid taking a position, it is up to the Bundestag to debate a differentiated economic and political cost-effectiveness analysis of German trade with the East. As an example, the question raises itself whether our earlier assumption still is valid that a growing economic interdependence between East and West would have a stabilizing effect. Looked at from a global political perspective it must be asked whether favorable credits to



the Eastern block still are profitable or whether they might not be better invested in equally promising but pro-Western raw material producing countries such as Canada and Australia or in the Third World.

Trade with the East will become increasingly less profitable for banks and firms through the 1980's--if not even a losing proposition. In connection with technology transfer the question should be raised, whether it was not a mistake on the 1970's that we sold to the East too cheaply? Why could not a number of large Western concerns agree on a common posture and a common price strategy? Should not, in the event of projects above a certain scale and for key sectors, the exaggerated competition of governments, banks and companies be diminished and a controlled and coordinated transfer take place?

#### Export Controls Only Effective Through Government Action

There is no doubt that the West has made a direct contribution to the Soviet arms buildup through the almost uncontrolled transfer of technology from the West to the Soviet Union. For reasons of national security and arms control policy, multilateral control of sensitive technological equipment must be tightened and, within the Federal Republic, be reorganized. For a democracy, the German practice of secretiveness surrounding export controls over strategic materials destined for the Eastern block is inappropriate. If such an export control is to be genuinely effective, then it must be under government control and administered fairly. This applied to those Western industries engaged in such trade as well as to potential buyers in the East. This paper intends to make its own contribution toward that end and to begin with a public discussion.

The Western industrialized countries are organized in terms of free market economies. It is the individual national concerns which, for the most part under competitive conditions, deal directly with the foreign trade organizations of the Eastern countries. National governments limit themselves to setting the basic conditions of trade expressed in such terms as trade agreements, interest subsidies, export guarantees, etc.

As additional macroeconomic motives of Western European countries can be cited diversification of trade as a stabilizing element to counter cyclical deviations and an employment policy factor. In light of the desolate economic situation in the East at the moment, both motives have largely lost their significance. Within the Federal Republic the employment impact of trade with the East is frequently overestimated. The DIW estimated the number of jobs created by trade with the East in 1980 at around 100,000. This figure is likely to decline over the next few years. The aspect of assuring raw materials and energy in East-West trade, with its significant though problematic priority, remains. Since the Soviet Union is the largest trading partner in this sector, there is a justified concern at an all too great dependency and the substantial flow of hard currency that could have consequences for national security policy. Parallel to the continuing problem of assuring raw material and energy sources, purely economic interests and goals have been formulated and perceived in a largely fragmented manner by Western concerns. In doing so, Western firms have pursued the goal of



stabilizing or maximizing profits. Yet this concerns only a few sectors such as steel and rolling mill products and machine tools. In addition must be counted plant construction, i.e. the export of complete industrial installations. In any case, opportunities and expectations are dependent upon trade deficits and the debt levels of the Socialist countries. Yet these purely economic arguments do not justify either an intensification of East-West trade nor overly great preference, such as favorable credit terms. The motives and interests of the Socialist countries are much more clearly defined. With the concept of "peaceful coexistence" at the end of the 1950's a new trend established itself, which took account of the fact that cosmetic "economic reforms" were not going to bring about the anticipated "take off," but instead that the economic potential of the Western countries would have to be exploited for their own development. The most pressing problem of all countries within CEMA was and remains the reduction of the difference in the level of development between themselves and the West and the closing of the "technological gap;" all their other motives are secondary. The huge transfer of Western technology--undertaken on credit--by the CEMA countries and especially the USSR during the 1970's has not, for reasons that are immanent to their system, resulted either in eliminating the differences in productivity or level of development nor even in reducing its scale.

Exactly the opposite has occurred: economic growth has undergone a spectacular regression, the competitiveness of their products on hard-fought world markets has diminished and the structure of their exports has not improved. While the countries of the Eastern block were exporting massive amounts of foodstuffs in the 1960's, their breadbasket today is to be found in the United States, Argentina, Canada and Australia. Agricultural exports from the United States to the Soviet Union have grown from some 1.5 million dollars in 1956 to over 1.7 billion dollars in 1978. Because of the permanently worsening consumer good supply picture, a large part of the population of the Eastern block has gone on a kind of permanent slow-down strike. Nonetheless, the massive technology transfers from the West have had some effect. Together with their irresponsibly high levels of indebtedness to the West, the economic collapse of the communist system has been averted. Except in Hungary, there are no signs of substantial economic reforms with any prospects of success. In the Soviet Union itself, it has been found impossible to halt the declines in labor and investment productivity. The dependency upon Western technology in several sectors such as oil drilling and movement, machine tools and petrochemistry has increased immeasurably. On the other hand, the Soviet Union has obtained additional options and opportunities to make use of imported technology for the quantitative development and the qualitative improvement of its military technology.

#### Trade Deficits and Indebtedness of the Eastern Block

Since 1970 not only the Soviet Union but also the other countries of CEMA have expanded their economic relationships and particularly their trade contracts with the countries of the West. This trend has been marked by the imbalance of imports on the part of the Eastern block leading to the creation of a permanent negative balance of trade. Far more goods and services were imported than were shipped abroad. The Eastern block had to plug this hole

in its foreign trade in some way if it were going to be able to pay its suppliers. The only way out--because merchandise exports from the East to the West were going to find few buyers--was through borrowing. The Eastern block's debts grew and grew. The six CEMA countries (with the exception of the Soviet Union) had, by 1973, piled up foreign indebtedness that was higher than the total of their exports for 1974. By 1979 their debts exceeded the value of exports for a full two years. Since by 1972 there were scarcely any substantial hard currency or gold deposits on account with Western banks, it appeared advisable to reveal their gross indebtedness. Yet to be able to calculate their gross indebtedness there would have to be added government borrowings, state guaranteed securities, World Bank credits, International Monetary Fund credits, the "GDR's" swing credits, credits with government guarantees and last but not least, the hard currency obligations of the CEMA banks.

In view of the explosion in the prices of raw materials and energy--and also of Western finished products and technology--the indebtedness of the CEMA countries continued to climb through 1980, accompanied by their diminishing economic growth. There are no possibilities for the CEMA countries to expand, over a medium or a long term, their exports to the West. This holds true for the Soviet Union as well.

#### Payment With Massive Exports of Consumer Goods

On the other hand their obligations have increased. Support of Cuba costs some 1.5 billion dollars a year; the estimated 12 billion dollars required for grain imports in 1982 will, according to recent estimates, not be sufficient. Poland last year required some 4 billion dollars. Soviet hard currency reserves had, before the end of last year, shrunk to some 5 billion dollars; latest indications point to their near exhaustion. Massive gold sales--at a time when its price is falling--new entreaties for credit on the European market, urgent requests for deferral of payments and--in the middle of winter--sales of diesel and heating oil on the free markets of Europe. All this give the impression of distress sales.

What can the Eastern block do to counter its overindebtedness? One answer would be the massive sales of consumer goods. With the exception of the Soviet Union all members of the CEMA have followed this strategy in an effort to equalize their balance of trade. The prices they have sought as a rule are one-third below the actual costs of production. Where are the political lines--active refusal of production--drawn for still further cuts in private consumption within the Eastern block? Has the West ever concerned itself with this question? On the other hand, the Eastern block must increasingly import raw materials, energy, technology and agricultural products--export profits are shrinking more and more as a result of obligations for payments on earlier negotiated credits, and even with rollovers of indebtedness there is scant help to be had, these serving only to conceal the causes. In the meantime, the abyss seems too bottomless and additional Western billions would not be able to change anything within the archaic structures of the Eastern economic and social systems.

According to a recent study of the Bank for International Payments (dealing only with bank credits) the Eastern block had, in 1982 alone, to pay back some 21 billion dollars in bank loans. Amortization is only possible through new and more expensive credits. As a result of the "Polish shock" and the economic situation, Western banks are only willing to extend credit to the Eastern block on increasingly shorter terms and with the requirement of negotiated extensions. Within this vicious circle it looks as if the 1980's would be the decisive decade for the entire Eastern block. The individual countries are faced with unmanageable economic problems. Military regimes cannot satisfy demands for liberalization or consumption with bayonets.

What can the West do in this situation? Except for humanitarian assistance, not much for the moment. It can, however, put its own house in order. This means agreeing on a common strategy and a common Eastern trade policy. Furthermore, a precise, up-to-date and centralized statistical summarization of all economic ties to the East is long overdue. The Bundestag is called upon to concern itself with East-West trade more than it has in the past and to demand of the Federal Government that it present an annual report to the full Parliament.

9878

CSO: 2300/258

## IMPORTANCE OF REPRESENTATION AT FOREIGN TRADE FAIRS

## Good Quality Exhibits, on Time

Tirana BASHKIMI in Albanian 6 May 82 p 2

[Excerpts] This year our country will take part in several international fairs in various countries. In order for us to make the best appearance at these activities it is necessary that this matter be taken in hand by all and not regarded as something which concerns only the Chamber of Commerce. All the ministries, executive committees of the peoples councils in the districts and managements of the enterprises have important duties in this area. The execution, on time and with good quality, of the tasks related to setting up our displays not only concerns our appearance at the fairs but also is related to increasing our exports and finding new markets. The best possible displays will give a complete picture of the great development which our socialist economy has undergone and its new achievements.

Experience from last year shows that when enterprise managers take these problems seriously the best results are achieved. Let us take for an example the "Steel of the Party" metallurgical combine in Berat, the copper smelting plant in Rubik and others. In these enterprises, the preparation of samples of articles for exhibition at the fairs was handled very well and was a matter of concern for the masses of workers and the specialists.

However, last year, some enterprises did not send all the samples of articles which had been approved by the ministries or, in some cases, the samples were not of the proper quality. For example, the carpet enterprise in Korce did not send some types of carpets and the cigarette factory in Durres did not send some types of cigarettes. Also, comments were made about the variety of packaging of bottles of beverages, jars of preserves, and other items.

Not much time remains until the opening of the international fairs this year. Therefore, all ministries and economic enterprises which are charged with preparing our displays should take measures to ensure that all the samples stipulated in the plan are produced so that, this year, our country will make a much better appearance than in previous years. All possibilities exist to do this. Therefore, everywhere, there should be an analysis of the work done up to now and action should be taken to send all the articles which are to be exhibited on time and in good quality. This will be an important factor in increasing our exports and in publicizing the success which socialist Albania has achieved in building socialism with her own forces.



Comment on Pavillion at Paris Fair

Tirana ZERI I POPULLIT in Albanian 18 May 82 pp 3, 4

[Article by Sadri Rrahmani: "Not Only Two Medals--Impressions of the Albanian Pavillion at the International Exhibition in Paris"]

[Excerpts] For 11 days, from 29 April to 9 May, the international exhibition in Paris held the attention of the residents of this city. Let us go back into history at the international exhibition of art and technology which opened in Paris in 1937, Albania went before the world and its industry with....eggs and beans. The press called the so-called Albanian exhibit "the Albanian bowl." The former bourgeois-feudal regime which had left Albania in great backwardness, in wretchedness and poverty, was what was represented in that exhibit. It did not represent the Albanian people who never lacked culture, talent or love of work and learning. It did not represent the soil and subsoil of Albania which never lacked great and valuable resources. This is what Albania is saying to the world in the years of the party. This is what our pavillion says at the present Paris exhibition and the many other fairs at which Albania is represented. The samples of minerals which we are showing at the fair do not "say" only that we "have minerals," but that we have based and will base the industrialization of the country on the extraction and processing of many valuable minerals such as chrome, copper, and iron-nickel and phosphites, bauxides, etc. and that we hold third place in the world in chrome production. The samples of the products of petroleum and coal say that socialist industrialization in Albania has a strong energy base which is reinforced by colossi of energy such as the Koman power plant and by new sources of coal and petroleum. The entire pavillion says that Albania is presented in the fair as a country with a developed industry and agriculture, which progresses each day, relying entirely on its own forces.

We should say that the participation of our country in the Paris exhibition was not simply an activity related to trade alone. On the contrary, it served as an occasion for strengthening the friendly relations between our country and the French Republic.

In a general evaluation of representation at the Paris Exhibition, the place of Albania is meritorious and honorable. Not only because of the two silver medals which were given to the Albanian pavillion, which, of course, have merit and importance, but also because of the "medals" which are more valuable to the socialist fatherland, to the people led by the party--the warm words, the love, the sympathy and the high appreciation of the people, the friends and admirers of Albania, who visited the pavillion, admiration for the country and for our great victories in the building of socialism and the defense of the country in accordance with the Marxist-Leninist principle of reliance on our own forces.

CSO: 2100/64

## BULGARIA

### MINISTER DWELLS ON FUTURE DEVELOPMENT OF METALLURGY

Sofia RABOTNICHESKO DELO in Bulgarian 27 Apr 82 pp 1, 4

[Article by Todor Bozhinov, BCP Central Committee Politburo member, first deputy chairman of the Council of Ministers and minister of metallurgy and mineral resources: "Intensive Development"]

[Text] The 12th BCP Congress formulated the strategic task of decisively undertaking the all-round intensification of the economy and the other areas of social life. The implementation of this exceptionally important party assignment in terms of the development of the country is being resolved in the area of the mineral raw-materials base and in metallurgy under the complex conditions typical of the sector.

The country's limited energy and mineral resources call for the development of technologies for the use of raw materials with a low concentration of useful components. This is developing as a Bulgarian experience in the solution of the raw materials problem. On the other hand, the worsening of ore-mining conditions in some areas entails higher production expenditures. Environmental protection requirements are also becoming stricter, which demands the use of complex and expensive equipment. Let us also add that the prices of mineral resources on international markets are also rising.

The increased production of domestic raw materials, regardless of the lean content of their useful components and the more difficult operational conditions, demands a new scientific solution of a number of problems characteristic of the all-round intensification of the national economy, with a view to their economic effectiveness, and the creation of prerequisites and opportunities for doubling overall profits during the 8th Five-Year Plan. The problem of improving the production structure with a view to lowering labor and material expenditures per unit of output and upgrading competitiveness on international markets is a vital one.

The aim of the programs which have been formulated for the development of the sector is to enable our country to reach the level of highly developed countries in the production of high-grade steel, which must reach 10-12 percent of the total steel production in 1990. Conditions are being created for the production of stainless steel high-temperature proof steels. They will be used in nuclear, metallurgical and energy machine building and the manufacturing of machines and equipment for the cement and ceramics

industries. This will have a substantial multiplication effect in the national economy.

The improvements in the production structure in nonferrous metallurgy are aimed at increasing the share of refined high-quality and highly effective rolled metal goods and the production of brass and copper pipes for the refrigeration and other industries and special alloys for special purposes.

The fast development of our powder metallurgy creates conditions for the number of parts produced with this method to exceed the number of cast and forged pieces. The production of the necessary iron and hard-alloy powders made of local raw materials for use in powder metallurgy is an important element in the all-round intensification of metallurgy, which will result in significant savings. The production of costly hard-alloy plates for cutting tools made of local raw materials will complete the cycle of our mineral industry -- from the extraction of the raw material to the production of highly effective and competitive finished goods.

Our country is rich in some industrial minerals such as quartz, zeolites, (disten), and alunite, which are valuable raw materials for the electronic, agrarian, ceramic and glassware industries. The development of technologies and mastering the production of nonmineral ores with high consumer qualities is an important direction in upgrading the effectiveness of the mineral industry.

The extensive application of nonmetallic binders based on carbon polymers creates opportunities for replacing economically important scarce imported raw materials. A program for the extensive use of kaolin as a plastic filler, with a view to reducing the use of petroleum products, is being implemented.

The comprehensive and intensive use of mineral raw materials with a maximally possible reduction in the volume of large-sized pieces of waste ore is the second important direction being followed in the sector's intensive development.

Technologies for the extraction of lead, zink, manganese, copper, silver and barite from Kremikovtsi iron ore are being developed jointly with Soviet institutes.

Pilot installations will be set into operation for the extraction of rare and rare-earth metals in processing imported raw materials, such as the extraction of vanadium and nickel from the ashes discarded by thermoelectric power plants, and rhenium and tellurium from ore concentrates. In the near future the tungstene extracted as a byproduct will be used in the production of ferroalloys, which are extremely necessary in making high-grade steels.

The hydrometallurgical and bacterial methods for the extraction of copper and precious metals from non-accountable and oxidized ores and, in the near future, pirite from melting loss are being used with increasing frequency. These methods will yield about 50,000 tons of copper concentrate by 1985.

The number of extracted useful components will increase from 12 to 18 and the level of utilization of sulfur in lead production will be increased from 12 to 50 percent. The increased extraction and utilization of useful components will provide the national economy an additional 2,000 tons of copper, 600 tons of lead, 10,000 tons of sulfuric acid and rare and precious metals.

The developing contradiction between rising demand for mineral and energy resources and their limited availability calls for upgrading the effectiveness of the work of geologists and geophysicists. On the basis of firm geological concepts and through the application of modern searching methods, our prospectors must expand the scope of their surveys.

The application of the new economic approach to the study of mineral raw materials will enable us to discover, survey quickly and propose the extraction of more mineral resources at lower costs.

The reconstruction and updating of existing production capacities by applying modern scientific and technical progress achievements makes possible improving sectorial economic effectiveness quickly and with minor investments.

Metallurgical combines are being extensively reconstructed and modernized. Facilities are being developed for raising the share of electrosteel production to about 45 percent of the total (which is on the level of the best worldwide achievements) and for raising the quality of the steel by treating it outside the furnace.

The commissioning of a highly productive installation for continual steel casting at the Lenin Economic Metallurgical Combine marks the beginning of a qualitatively new stage in the development of our ferrous metallurgy. Another direction in the application of technical progress is vacuum steel production, which is scheduled to reach 14.5 percent of the total output in 1990.

In nonferrous metallurgy, a technology for autogenic smelting of copper concentrates will be applied during the Eighth Five-Year Plan. This will double labor productivity, achieve a 97 percent level of copper extraction and considerably reduce the use of energy. As a result of the modernization and reconstruction of installed capacities, the consumption of energy and metal will be reduced in metallurgical output so that steel losses per ton of metal will be reduced by 135 kg in 1990, thus reaching the level of the developed countries in terms of this indicator.

Technologies for increasing the density of parts to 98 percent and reducing additional processing (such as high-temperature isostatic and dynamic compression of metal powders, metal-ceramic sheet mill, etc.) are being applied in powder metallurgy. This will enable us to produce parts with better physical and mechanical qualities, to enlarge their dimensions and increase their weight and to improve their anticorrosion properties.

The more extensive application of geotechnologies for separating useful components from the rock through dissolution, gasification or smelting, in the course of which the enriched raw material floats on the surface is a major prerequisite for the effective treatment of lean mineral deposits.



Such technologies are almost harmless to the environment and free man from difficult and health-threatening work.

A main trends in sectorial intensification is the application of wasteless technologies, which ensure the repeated utilization of valuable raw materials with less energy. The implementation of the wasteless technology programs will result in the utilization of 1,350,000 tons of metallurgical slag, 275,000 tons of middling slime, 680,000 tons of sulfur dioxide and others.

The implementation of the programs for comprehensive production automation and mechanization will lead to a fast increase in labor productivity and the elimination of heavy and unattractive types of work. To this effect programs are being implemented for controlling the distribution of energy resources and blast furnace output. Systems for mass-spectrometric control of output in the production of converter steel are being applied, as a result of which the duration of the process will be shortened by 5 percent and the amount of useful products per unit of raw materials will be increased by 0.5 percent. A machine for the cross-cutting of hot rolled sheets will be controlled automatically, and so will hot and cold rolling and pipe-rolling production and the transportation system in open pits. The application of the "Geolog" system for the automated processing and interpretation of the results of geophysical and geochemical studies is being expanded. Production automation requires the training of performing cadres for control and supervision of production processes, the creation of control algorithms and the automated formulation of applied programs.

The creation of conditions for the use of existing productive capital, properly supplied with raw materials and markets, with the help of minor reconstructions and improvements is one of the intensification elements the results of which are manifested the soonest. Steps are being taken to ensure additional production from local and waste raw materials by metallurgical plants producing finished metal goods in demand.

The construction of production capacities is focused on the development of new mineral deposits through the use of progressive technologies. The share of ore extracted from strip mines will be increased to 85 percent of the total. If necessary and economical, automotive transportation and highly productive loading machines and drilling systems will be used in underground mines. A modern plant for ferroalloys and high-grade steel will be built to ensure the effective use of local raw materials and the production cycle of the mineral-metallurgical complex will be completed.

Guided by the party and the other public organizations, the labor collectives are developing their creativity and initiative in the nationwide socialist competition for the implementation of the decisions of the 12th BCP Congress and the comprehensive intensification of the sector.

ROBOTRON COMBINE SETS PRODUCTION, SAVINGS GOALS FOR 1985

East Berlin NEUES DEUTSCHLAND in German 8 Dec 81 p 3

[Report to SED Central Committee by collective of Robotron Combine, signed by Prof Dr Wolfgang Sieber, Robotron General Director; Klaus-Peter Bernsdorf, chairman, council of FDJ secretaries; Wolfgang Hartig, secretary, plant party organization and party organizer, SED Central Committee; and Manfred Ehring, chairman, plant trade union executive board and representative, IG Metall [metalworkers industrial trade union] central executive board: "Results from Science and Technology Will Be Put to Even Better Use--Above-Average Rates of Increase up to 1985; Majority of New Products with Modern Microelectronics; Significant Reduction of Energy and Materials Consumption"]

[Text] Dear Comrade Erich Honecker!

At the VEB Robotron Combine, we are now holding the conference, "Production and Application of Industrial Robot Technology--the Main Way to Automation." Discussions are focused on the combine's tasks for implementation of the ten main points of the economic strategy for the eighties, especially in the field of robot technology.

We are taking this conference as an opportunity to convey the kindest regards on behalf of the enterprise collective and all workers at the VEB Robotron Combine to you personally and the Central Committee of the Socialist Unity Party of Germany.

The policy of the 10th party congress and its consequent endorsement at the third session of the SED Central Committee is receiving our complete approval and support. Implementing the decisions makes high demands on all managers, the collective and each individual worker. Also applicable to our combine is that our economic tasks are to be accomplished with even less material than originally planned. Therefore, we are attaching the gratitude of all our almost 70,000 workers to the Central Committee and to you to creative work achievements and high performance in the socialist competition to further strengthen our republic economically and to safeguard peace.

Productivity 16 Percent Higher Than in 1980

With pride and joy, we can inform you that we have attained a further increase in efficiency in the period to 30 November 1981. Based on the increase achieved in labor productivity of over 16 percent compared to the same period last year, in these 11 months our combine has ensured a high share in efficiency in the overall goal for 1981.

With that we were able to increase production of industrial goods to over 116 percent, output with the "Q" mark of quality to 113 percent, output of consumer goods to 118 percent and exports to the USSR to 110 percent compared to the same period last year.

According to the quotas of our competition pledges, we have increased labor productivity three percent above the 1981 plan as of 30 November 1981. With that, we produced 5.8 additional daily output, including

- 0.9 million marks worth of additional consumer goods, and
- 32.5 million marks worth of additional exports to the USSR.

In the combine enterprises, 148 industrial robots have been installed so far. By the year's end, 215 industrial robots are to have been produced and 180 installed for use in production.

We realize that greater efforts by all combine workers are required to secure and further extend purposefully the gain in time achieved. Therefore, we are aiming especially at a high start for 1982 to achieve already in the first quarter 25.5 percent of the year's industrial goods production.

We have consequently continued our chosen method of elaborating and defining our long-term goals for complex and selected tasks based on party and government decisions.

Thus, the following are among the plans for the period to 1985:

- application of microelectronics,
- production and use of robots,
- the complex program to efficiently use social labor capacity and
- the orientation to continuing socialist competition including the adjustment for the 1982 plan year for all combine enterprises.

This achievement enables us to organize and implement the concrete tasks purposefully and consequently above the plan in fulfilling the plan. With the competition orientation to 1985 and the 1982 plan year, we are setting high standards for managing the national economic processes and for raising the quality and efficiency of social labor.

In doing so, we are focusing on the complex pledge of growth rates and especially on those of qualitative indicators. Thus, in 1982, we will be striving for goals that will ensure that we realize the following increases by 1985:

Indicator	Increase in 1982 state target as a percentage of 1981 state target	Increase in 1985 state target as a percentage of actual 1980 amounts
Labor productivity	113.8	171.4
Industrial goods production	114.3	175.0
Net production	119.3	196.9
Exports to USSR	138.7	225.8
Marketable production of finished consumer goods	111.0	174.1
Production cost reduction, overall	6.24	24.43

## Oriented to Full Satisfaction of Demand

On the occasion of the exchange of experience between the central committee and the general manager and party organizers of the combine central committee, we stand by the pledge made which is in full a component of the state targets for 1982 and for the period 1981 to 1985.

Based on an ever better utilization of economic results from science and technology, we will be purposefully making a higher contribution to achieving an effective export structure and to providing the means of efficiency for the economy and finished goods for the population. In doing so, we are concentrating on orienting the turnover time for main products to under five years and raising the share of newly developed products in the production of goods subject to test to at least 20 percent per year.

The share of 50.0 million foreign-currency marks worth of new products in NSW [non-socialist monetary area] exports is to be purposefully achieved and surpassed. In terms of new products, we are concentrating on full satisfaction of demand in the first or second production year.

## Introduction of 1370 Robots Is Goal

Already in 1982, the majority of products will be supplied with the application of modern microelectronics. With that, among other things, energy consumption is being reduced an average of 30 percent and production and testing cost is being reduced an average of 30 percent. For the following major products, we are reducing the unit energy consumption in the following amounts compared to predecessor products:

- the YeS 2655 M central processing unit, by 55 percent;
- the K 1630 microcomputer, by 70 percent;
- the radio equipment PSK-TDM 120/PCM 2000, by 80 percent per telephone cable; and
- the MFS 1.2 floppy disk storage unit, by 70 percent.

In consequent translation of economic policy goals, we pledge that with the aid of complex socialist efficiency improvement in the plan for science and technology, the following above-plan results will be achieved:

- 1.7 percent savings in work time, corresponding to 200,000 hours,
- 4.0 percent savings in material costs, corresponding to 1.0 million marks,
- 3.6 percent reduction in production costs, corresponding to 2.5 million marks,
- and 2.0 percent of equipment for improving efficiency, corresponding to 1.5 million marks.

Through economic use and handling of energy and fuel, we have set ourselves the goal of saving a total of 200 terajoules, including

- 1842 tons of brown-coal briquets,
- 4600 megawatt hours of electricity, and
- 253,000 cubic meters of city gas.

The concept of saving fuel oil is being persistently implemented. Obsolete and inefficiently used basic resources valued at 91.0 million marks are being eliminated and the unit material consumption for selected materials is being reduced an average of 6 percent.



Our current conference is being used to implement the basic policy of the combine for development, production and introduction of 1370 industrial robots by 1985, including 246 units already in 1982. The conference will provide a valuable impetus to further work and help secure the goal of releasing 3298 workers by the installation of robots, which corresponds to a share of about 40 percent of the total number of workers planned for release.

In securing the complex program, "Improving Efficiency—Economy—Production Organization—Working and Living Conditions," we will be accomplishing the following tasks in the enterprises:

- raising the level of mechanization and automation in prefabrication, auxiliary and secondary processes, assembly and testing;
- organizing increased machine operation and increased utilization of machines and plants;
- maximum reduction of workplaces with activities harmful to health;
- creation of greater meaning to labor and greater responsibility in the workplace, and securing a higher technological level in the areas of assembly;
- securing higher quality in the end product; and
- achieving higher flexibility for incorporating changes in the production run.

Through science and technology and especially by making use of the reins of responsibility as well as the supervisory system, we will be persistently exerting managerial influence to ensure that organization of new developments is suited to automation and robots. All efforts by the enterprise collectives will be aimed at achieving:

- an above-average increase in productivity,
- the accomplishment of an investment quota from at least 1.5 to 2.3,
- a payback period of a maximum of 3 years, and
- a continual increase in the fixed capital quota.

We will be purposefully selecting service projects and transferring them to our youth collectives as youth projects.

A Reliable Partner at All Times

Dear Comrade Erich Honecker!

The third session of the central committee made us aware under what changed international conditions the policy of the main task is to be carried out. With that, it is being proved more and more for our combine too that the ten main points of the economic strategy for the eighties have to be the continuing measure of our business.

We pledge that the Robotron Combine VEB continues to be a reliable partner of the national economy and will continue supporting the policy of the party of the working class successfully with new ideas and deeds.

Our achieved results will be the evidence that we have persistently made greater demands. This is our contribution to the proven policy of the Socialist Unity Party of Germany aimed at maintaining peace and the welfare of the people.

Dresden, 2 December 1981, With socialist greetings.

B545

CSO: 2300/193

COMBINE DEVELOPS CENTER FOR HYBRID CIRCUIT PRODUCTION

East Berlin DIE WIRTSCHAFT in German Vol 36 No 12, Dec 81 p 7

[Article by Heiner Pachmann: "Developer, Producer, User in Closed Chain"]

[Text] A decisive change has occurred since mid-November in the profile of the Berlin VEB [State Enterprise] for Telephone and Signal Equipment Production (TSB). At that time, the traditional manufacturer of apparatus for dispatch and two-way telephone systems began producing microelectronic hybrid circuits, a new line for the plant.

This measure was initiated with the opening of the first section of a newly established center for small series production. Already being made there in this year are hybrid circuits, the production quantity of which is to be considerably increased in the period of 1982 to 1985. With that, the entire demand by Berlin's industry, research and development can be met.

What is really so special about this production center? After all, the Hermsdorf Ceramic Plant has been making hybrid circuits for years and in considerably higher quantities too.

The answer can be quickly reduced to a common denominator. With its establishment, an FDJ [Free German Youth] district youth project, it was once again shown that taking a responsible, risky, unbureaucratic and unconventional approach to a complicated task in our national economy proves its worth. With the new production center, not only was the foundation laid for a gain in Berlin's industrial efficiency, but also for the traditional manufacturer in Hermsdorf which can now concentrate on large series production. Since numerous enterprises from various combines are interested in this project, the district youth project, "Microelectronics/Hybrid Technology," from the very start placed especially high demands on the planning and management process.

Many Sought Similar Solutions

What did the case history look like? In 1979, at the Communications Electronics Combine headquartered in Leipzig, deliberations began on how to meet future demand by combine enterprises for hybrid circuits. Their use determined a future production increase. At the same time, at the Berlin Electrical Apparatus Plant (EAW) Combine, possibilities were sought to provide for its own small and medium series demand by specific customers for hybrid circuits.

The Communications Electronics Combine decided to build a small series production center in Berlin where the majority of user enterprises is concentrated.

But who was to make these circuits? No user enterprise had experience. "We decided to take on this production for two reasons," explained Karl-Heinz Dasche, TSB director. "First, we wanted the hybrid circuits that we use in our products too to be available in sufficient quantities as quickly as possible. A quick decision was therefore sought. And second, we were certain that we would receive effective support from all combine enterprises, but especially through the SED [Socialist Unity Party of Germany] district administration. That was important to know because it was a risk for us to take on a completely different line with current and growing production."

Microelectronics was to be the proving ground for the youth. True to this idea, the Berlin SED district administration suggested the FDJ district administration declare setting up the small series production center, and even more, developing the new circuits too, a district youth project. The partners: the basic FDJ organizations of the combine enterprises of the TSB and the Koeppenick Radio Plant, as well as of the combine research center, the Institute for Communications Technology.

"With the support of combine management, we succeeded in managing the available resources efficiently too," said Karl-Heinz Dasche, who as the VEB TSB director is also the state manager of the youth project. "Thus, besides the radio plant, other Berlin combine enterprises, like the VEB for Measuring Electronics and the VEB for Studio Engineering, helped us with the structuring of important efficiency measures. Planning and management of the project were firmly in the hand of a combine management. That proved its worth."

In the EAW Combine, it had also been decided to set up a small series production center. However, when Dr. Hans-Juergen Just, manager of the hybrid laboratory in the EAW research center, the Institute for Automatic Control Technology, in the course of a study, heard about the district youth project, he appealed directly to the TSB enterprise director. Would it not be possible and appropriate to also make the circuits needed by the EAW Combine in this production center, already in the first implementation phase?

The problem was very complicated, for these circuits are made using the so-called thick-film technology. Originally, only thin-film circuits were to be made in the production center, however. While only about 19 process steps are needed for their production, up to 100 steps have to be mastered to make the LSI thick-film circuits. Nevertheless, the management of the Communications Electronics Combine agreed with the decision that saved the additional investment of about 10 million marks. With the Institute for Automatic Control Technology, where all the circuits are being developed, the fourth partner in the district youth project was finally acquired, and it was officially committed at the start of 1981.

#### Effectively Supported by Territorial Authorities

Four partners of different character, a great number of supporting enterprises, two combines--how could agreement be obtained from everyone?



"We could not have overcome all the difficult hurdles in setting up the production center without backup," Karl-Heinz Dasche said thereto. All the partners had and have to be included in the planning and management of this project, whether they are now directly or only indirectly involved in the youth project. However, that means that their special needs and capabilities have to be considered too. That especially requires regular consultation on and control over the status of the youth project.

How helpful the support of the territorial authorities was too was shown at the latest when space for the new production center had to be provided. The expansion and reconstruction of a part of the TSB enterprise was charged to the four other enterprises, for whom the new production and storage spaces had to be earmarked in return. Likewise, on the question of manpower. With the aid of the competent state agencies, this problem will be solved by expanded training and increased assignment of graduates.

#### Youth Collective Mastered All Tasks

"As the state manager, we always strove to see that our young professional cadres were included as early as during the elaboration of the concept for the youth project," Karl-Heinz Dasche noted. "In addition to this theoretical preliminary work, I would like to say, the basic FDJ organization also took care of the practical implementation. The young people displayed tremendous readiness for service during the reconstruction, whether it was a question of the creative activity of architectural freedom or the equipment for the production center. The initial skepticism toward young people being able to cope with a project such as establishing a production center for microelectronics yielded more and more. When youth are properly guided, they are capable of remarkable achievements. That is one of my most important experiences."

Along with the support of combine management, the enterprise director views especially the aid and supervision by the SED district administration with all scientific, technological and technical problems as the essential reason for the first partial success of the district youth project.

"The risk that existed when we got involved with this new line of production was thereby reduced," he summed up. "At the same time, cooperation between combine management, us as enterprise management and the management of our partner enterprises has proved uncomplicated and problems have been resolved directly, without having to go through the long official channels. The decisive factor for that was that in addition to their own advantages, everyone recognized the common national economic importance of this project too and pressed for an effective implementation."

Thus, in a relatively short time--only seven months passed from start of the extensive reconstruction work to the start of production--not only was the profile of an enterprise changed. By concentrating production in Berlin, a closed chain was created territorially between the developer, the producer and the user. It is making it possible, without having to cross bureaucratic boundaries, to both rapidly put research results into production and provide feedback from the production process. With that, an important foundation has been laid for the production increase in many of Berlin's electrical equipment and electronic enterprises in the eighties. The good planning and management by all the partners and their uncomplicated cooperation with each other have borne their fruits.



# NEW PROPOSALS TO ALTER HUNGARY'S ECONOMIC ORDER

Budapest FIGYELO in Hungarian 14 April 82 p 3

[Article by Laszlo Antal: "Learning From Experience. Ideas on Perfecting the Economic Mechanism"]

[Text] Under the system for managing the economy that developed after 1968, the enterprises' dependence on their managing (including some social) organs has been retained, but the enterprises themselves enjoy greater freedom of movement. This is the primary reason why the economic mechanism introduced in 1968--despite its numerous compromise solutions--has been functioning far more effectively than its predecessor and, within certain limits, provides opportunity for adjusting to the changing economic conditions. At the same time the economic mechanism manages with instruments that are more vague for the enterprises--for example, by "dismantling" the financial regulators and subsidies--and with so-called "expectations." The functions of the owner of capital assets and, consequently, the responsibility associated with decisions are divided among various supervising organs, professional organs, and enterprise management. This peculiar system of collective decision-making, with its many participants, leads to decisions that are lengthy and often are "expropriated" from the initiator of the decision.

## Critical Junction

For external and domestic economic reasons that by now are well known, our economic situation has worsened since the mid-1970s. External economic equilibrium can be improved only at a substantially lower growth rate--approximately 1 percent, instead of 3 percent a year. As a result, the rate of accumulation is declining year by year, and maintenance of the attained level of consumption creates a growing problem.

The changing economic conditions affect society as well. At a consumer price level whose rise was relatively slow until recently, we have succeeded in ensuring favorable supply. Reallocation of manpower occurred only occasionally on the enterprises' initiative, and not at all by decision of the central government. The prospects of obtaining housing improved steadily through the mid-1970s. Social benefits have become "acquired rights." All this created a sense of secure livelihood, regardless of whether or not these developments could be termed sound from the viewpoint of social policy or on the basis of economic considerations. But the events of the late 1970s and early 1980s compelled us to reassess our previous indirect methods.

One possible assessment of the present situation would be to say that path corrections are always cumbersome, new regulators still require refinement, and all this slightly prolongs the period of consolidation. There is much truth in this: by perfecting certain elements of control, through measures directed toward partial areas, it is indeed possible to achieve temporary successes, and these too are important. But this mentality harbors the danger of failing to recognize the deeper trends--breaking them down into partial processes from the very outset--of willy nilly regarding as given, and hence as unalterable, the principal processes that have evolved in the economy.

The view can and does exist that these trends are unambiguously determined from the outside (by the world economy's environment) and therefore are beyond our control. Hence our isolation, respectively the moderation of the openness of our economy, or its "optimal regulation" is elevated to the rank of strategy, practically renouncing the maintenance of the position that we won for ourselves during the past two decades.

A third possibility that, in my opinion, offers a truly successful solution, but one that is by no means free of problems, is the economic mechanism's comprehensive development, by pursuing the 1968 process of economic reform. The social conditions for this are given. Significant changes of the economic mechanism usually are triggered by necessity rather than by a favorable situation. Progressive changes initiated centrally are usually characterized by the political leadership's ability to foresee this necessity to some extent, before the economic stresses intensify.

The compelling economic conditions now have an incentive effect rather than a paralyzing one, as this is indicated by the changes begun recently. But we are hard-pressed for time, because such changes presuppose the initiative participation of enterprise managers, and generally society's active identification with the changes. Recognition of this fact, however, must not provide room for ill-conceived "solutions." Action undertaken under necessity must be particularly deliberate, carefully weighing the economic and social consequences.

#### Energies for Growth

The economic mechanism to date has not proved sufficiently suitable

--To provide the conditions for the functioning of the market within a planned economy;

--To suitably enhance efficient utilization of individual talents and abilities, such as entrepreneurship, willingness to innovate, inventiveness, the owner's motivation;

--To ensure forceful assertion of social control's role in the harmonization of interests.

Solution of these tasks could liberate new energies for sustained growth. The model that I have in mind is consistent with the basic principles of the 1968 economic reform. However, its objective--specifically by utilizing the experience of the past 12 years--is not merely the consistent implementation of these principles; it exceeds them in several essential respects. The most important differences are as follows:

In the enterprise (cooperative) sphere, direct dependence on the managing organs must cease. The managing organs must not exercise the owner's functions, not even partially.

The market's regulating role must be much broader: not only in product distribution, but also in capital allocation, wage regulation, and partially also in the management of the infrastructure. But in none of these areas would the market's regulating role be exclusive.

Within the state's economy-managing functions, the sphere that ensures the general framework of economic activity (normative regulation) would be separated from market intervention. In the case of noninstitutional interventions in the future, preference will be given to partnership relations with the economic organs and their common-interest associations.

Transformation of the system of enterprise organization is the key to perfecting the economic mechanism, because organization of the real market can be expected only from a radical modification of the relationship between the enterprises (and co-operatives) and their managing organs, and from developing common-interest associations within and outside the enterprises, and a system of intraenterprise organization that supports these changes.

We must strive to develop a heterogeneous system of organizational forms for enterprises, one within which transformation and combination of the various organizational forms would generally take place without government intervention. Another prerequisite for successful development is abolition of (foreign-trade and capital-reallocating) monopolies that restrict the economic sphere's activity.

#### Substance and Form

As new organizations there could function enterprise-operating bureaus (vallalkozas-lebonyolito irodak) that would replace the present large-scale enterprises (trusts, associations, large enterprises) with several factories, factory units and plants that are economically viable on their own. The bureaus would differ from the present large-scale enterprises in that all their functions related to day-to-day operations would cease, and the member enterprises would be independent. The member enterprises would transfer to the bureau a proportion of their developmental resources as specified by law. The bureau's staff would consist of the directors of the now independent enterprises, and perhaps of hired experts.

It would be the task of the bureau to choose and evaluate managers; also to decide questions of strategy, and of allocating developmental resources, but solely on the basis of profitability and rate-of-return considerations. The bureau's staff would screen developmental proposals on the basis of competitive bidding and by majority vote. The fact that the bureau's material self-interest is linked to the growth of the bureau's assets, and that the decisions concerning the allocation of developmental resources and the choice of developmental directions are collective decisions guarantees that the decisions are based solely on profitability and rate-of-return considerations. The bureau would have the right to allocate resources also to enterprises other than its own enterprises, and to found subsidiaries in other branches of economic activity, even by borrowing. Thus the business-operating bureau would function as a "quasi capital market" and could be developed from the



present organizational forms. Thus the director of a member enterprise belonging to the bureau would have a twofold material self-interest. On the one hand he would have a material self-interest in the growth of his own enterprise; and on the other, in the consolidated profit of the bureau, which in turn depends on the profitability of all the member enterprises.

The member enterprises would decide with full responsibility the questions concerning production, marketing, and the operation of the assets made available by the owner organization. The managers of member enterprises would receive personal salaries negotiated with the owner organization.

The incentives for managers are linked to long-term profit. Managers would be appointed for a fixed term only. Thus the material self-interest of managers now includes also the risk of failure, and no longer as merely a moot possibility. The situation of nonmanagers under this arrangement is characterized basically by the fact that they are employees.

The cooperative is another possible form of "enterprise" organization. The owner's functions are exercised under this form by the entire collective, respectively by the body (for example, the board) that the collective directly elects, and include a proportion of the operational authority to set working conditions and regulate wages. The elected body decides essential questions pertaining to the enterprise or has a minimal right of veto. It appoints the manager, approves the enterprise's plan and organizational structure, and directs the finances of the enterprise. It decides how much of the produced gross income becomes personal income, and what proportion the collective allocates to accumulation. Of course, this decision is influenced by the general system of taxation, but by no means so decisively as in the case of the present regulations governing the formation of the profit-sharing fund. In a cooperative the material self-interest is more sensitive to short-term changes in income, and the common interests of managers and workers are more direct than under the enterprise system; therefore decisions that are promising in the long run, but which could affect momentary personal incomes unfavorably, must first be reconciled with the collective.

The entrepreneur (or collective of entrepreneurs) who leases society's capital assets is the third type of management organization. Potential entrepreneurs are awarded management positions by tender, through competitive bidding, and they operate in the same form the subunits capable of independent commodity production. The lessee has an absolute material self-interest in profit in excess of what he bid, because this extra profit enhances his own wealth, but he is personally responsible for payment of the pledged profit. The managers, heads of subunits, etc. function as lessees for a specified period of time.

In addition to the proposed three organizational forms, of course, there would also exist the various forms of small companies that are now unfolding.

The listed organizational forms differ from one another in the separation of the functions of owner and operator, and also in terms of the appointment of managers, material self-interest, and the status of the workers. Each form has its justification. If we succeed in developing a system under which the various forms can exist side by side, and where legal barriers will not hamper the spontaneous development and transformation of the organizational forms, then sooner or later there will develop a system of viable organizational forms.



## Public Setting of Wages

In the proposed model, as I have already mentioned, the market will act as regulator in a significantly wider scope, but not as the sole regulator. First of all we must develop a system of wage regulation that provides wider room for the effect of the job market. For the present system of enterprise wage regulation is one of the most serious obstacles to business-like operation. The present system of wage regulation could be replaced by a system of collective wage contracts. (See Laszlo Herczog's article: "Regulation by Negotiation," in FIGYELO, No 10, 1982.) The collective wage contracts would be supplemented by a progressive--but not deterring--income tax.

No central regulation is necessary in the case of those forms of small companies and cooperatives where wages can move also downward. The published collective wage contracts would transmit their effect also to this segment of the job market. But I regard as indispensable that a higher level of incomes be allowed to develop in this sector, primarily to compensate for the greater risk and smaller income security, and to reward the mostly higher intensity of labor.

A feasible solution for perfecting the present system of price regulation would be to let the Hungarian Chamber of Commerce assume the task of organizing the price negotiations in the case of the principal commodity groups. Besides the large producers, users, importers and distributors, also representatives of the small ones and officials of the Price Office would participate in these negotiations. In the annually recurring negotiations the interested parties would agree not on prices, but on price-policy behavior, and the agreements would be made public. Under these circumstances the specific agreements on prices would be truly free-market prices, unhampered by specific limits between the various price levels.

However, price simulation would have to be retained in the case of energy sources and raw materials. Market stability could be ensured if a few "direct state" enterprises pursue a policy of market intervention, and purposeful import competition when necessary (which would not require substantial outlays of foreign exchange).

## Constant Competition

State intervention cannot be excluded, not even in the distant future. Except in agriculture, however, all forms of aid to reimburse costs could be abolished. In the case of production that shows inadequate profitability but temporarily is still indispensable, and also in lagging industries, it is not the costs that should be reimbursed. Rather it might be warranted to provide aid for development necessary to end the losses; this should be provided on the basis of a business-like agreement between the enterprise and the state, by tender. The state must regulate the manner in which the loss is to be settled. Intervention in the marketing conditions cannot be normative, because of the individual nature of the commercial contracts and marketing programs. However, there is room for competition and for any form of public tender.

All these changes presuppose, like a chain reaction, also the perfection and transformation of national economic planning, of the financial system, and of their institutions.

An essential feature of my outlined proposal is that the enterprise sphere is the aggregate of heterogeneous organizational forms capable of growing into, and of competing with, one another. The proposal breaks the one-way vertical dependence. The functioning of the economy would be governed by several forces in partnership (central planning, financial management, common-interest association of businesses, the trade union, and the market). The plan formed in this manner would result in a real integration of entrepreneurial efforts, and of the various macroeconomic and social priorities, because the plan would be adopted after mutual reconciliation. I think this is what the primacy of the national economic plan's objectives really means.

I do not imagine that the outlined rules of the game, if they can be introduced at all, would be able to function immediately. I envisage a long process of gradual development, one in which every step cannot be foreseen and planned in advance. On the basis of practical experience it might be necessary to make more specific or correct some of the original ideas.

1014

CSO: 2500/220

SITUATION, EXPERIENCES OF NEW FORMS OF BUSINESS OPERATIONS DISCUSSED

Budapest KERESKEDELMI ERTESITO in Hungarian No 8, 6 Apr 82 pp 173-175

[Bulletin of the Ministry of Domestic Trade Concerning Experiences With and Further Tasks of New Forms of Business Operations Introduced in Trade]

[Text] In January 1981 retail trade began the conversion to contract and leasing operation of small businesses. As a whole experiences with the new forms of business operation are favorable. The opinions of councils, enterprises, cooperatives and the populace prove that the contract and leasing form of operation well serve both the consumers and the interests of the national economy.

The achievements in introducing the new forms of operation, the operational experiences and the further tasks of the conversion are as follows:

1. The Situation in Introducing the New Forms of Business Operation

After widespread preparatory work and in accordance with the provisions and guiding principles the enterprises and cooperatives began propagation of the contract and leasing forms of operation.

In the first year of the introduction of the new operational forms the enterprises and cooperatives handed over 2,212 businesses. Of these 2,054 have the contract form and 158 have the lease form. The results--taking into consideration the character of experience acquired in the first year--are favorable and correspond to the original ideas. This is given significance primarily by the fact that businesses operating in the new form can be found throughout the country and in every trade, serving as an example for their further widespread propagation.

In the first year the management organs operating commercial units advertised more than 5,000 businesses, 10 percent of all units. The entrepreneurial spirit was moderate in the first year.

The entrepreneurial spirit was greatest in the catering industry. Espressos, restaurants, bars and taverns in the higher category attracted the most bidders. There were an acceptable number of applications for lower category drink shops, espressos, snack-bars and buffets.

The ratio of conversion for industrial article shops is similar to that for catering. The entrepreneurial spirit was moderate in the foodstuffs branch. There were bids for only about one quarter of the units advertised. There were few applicants for shops selling general foodstuffs, spices, meat and milk; somewhat more bid for vegetable and fruit shops.

Enterprise examples show that the leasing and contract form of operation can be propagated in the foodstuffs branch also—if realistic conditions are set and the network workers are properly prepared and educated. On 1 January 1982 there were 346 contract foodstuffs shops operating in the country and in general they were very successful.

The ratio of conversion for industrial article shops is similar to that for catering. About two-thirds of the clothing and sundry articles retail trade units advertised were taken over.

Interest and entrepreneurial spirit varied significantly by region also. The ratio of conversion varied between 19 and 62.4 percent.

## 2. Operational Experiences With Contract and Leased Businesses

The business leaders are striving to develop an offering of goods better and flexibly adjusted in time and variety to demand. The ratio of direct acquisition from private persons and artisans is not considerable and has significance primarily in the offering of fruits and vegetables by foodstuffs shops and of trifles and fashion goods by industrial article and clothing shops.

In a few branches a significant proportion of the business leaders undertake acquisition and shipment of goods. It is important that the management organizations determine the magnitude of the defrayal of delivery costs in accordance with the pertinent guiding principles. Concessions given in this area must be established in such a way as to create suitable interest in using one's own transportation tools.

The creation of self-service wholesale warehouses significantly improves buying conditions for the leaders of lease and contract businesses. In the period ahead it would be useful to create more self-service wholesale warehouses in the association form (bringing in the industrial shippers).

Warehouse services for contract and lease business leaders can take place in the same way as for other businesses. One cannot permit the discrimination experienced in a few cases—tie-in sales, late service for contract shops, etc. It is unfortunate that a few shippers have "excluded" the shops operating in the new form from their routes.

As a result of a more active acquisition policy the number of shortage items has decreased in these businesses. The cultured nature of service provided has improved significantly. Service is more courteous and attentive than before. Personal contact between business leaders and customers is stronger and care is taken to develop a permanent circle of customers.



New services have been introduced in a number of businesses (in catering businesses they provide take-out menus, disco programs and organize programs more actively while in industrial article shops they permit people to reserve items in advance, have simplified the handling of claims, etc.).

The business leaders have increased the capacity of their units in various ways. By eliminating storerooms and offices and using simple work and organization procedures they have expanded the sales space. A number have set up sidewalk and garden areas. The times they are open are better adjusted to consumer habits.

Turnover at these units has increased significantly as a result of the measures taken. When signing the contract the business leaders undertook to increase turnover 15-20 percent in the first year of operation. We have only approximate information concerning the actual development of turnover. A few examples show that in a number of cases the actual turnover is two to three times what it was.

As an average personnel decreased by more than 20 percent in the contract businesses. The decrease is characteristic primarily of catering businesses with larger numbers of personnel. In foodstuffs businesses in general the improvement in efficiency means that they are doing more business with the same personnel. The situation is similar in regard to embodied work. The increase in turnover is achieved with the same or smaller fixed and circulating assets and care is taken to conserve on energy and costs.

The share of profit paid to the enterprises by the contract businesses is nearly twice the profit achieved by these units in the preceding year.

The management organizations calculated into the initial fixed rate fee a profit larger by 70 percent. In the course of bidding this increased by another 25 percent--differentiated by branch.

In the foodstuffs branch businesses were frequently advertised with an excessively high fixed rate fee. It is incorrect to project the average enterprise profit level for shops which had been operating at a loss--and under unfavorable conditions--if the conditions for profitable operation are lacking.

The contract was voided for 1-2 percent of the units operating in the new business form. A role was played in this by poor management or payment difficulties arising from excessive bidding; in one or two cases the contract was voided due to sickness, death, etc. The magnitude of contract voiding is not significant and one must count on a similar ratio in the future also.

The trade guidance work of the enterprise centers has practically ended in regard to the contract units. Some of the enterprises--despite the guidelines issued--interpreted this to mean that they need offer no aid to these businesses. The opposite mistake was made also, when they intervened too much (for example, in regard to acquisition sources, setting opening times or profile, etc.).

The obligatory administration of the businesses is minimal. A few management organizations stuck to the prescriptions used earlier and accordingly obliged the contract businesses to provide superfluous reports in a number of places (for example, daily personnel and turnover reports, etc.).

Investigations performed in the enterprise centers showed that preparing the transfers, doing the calculations, advertising, discussing the bids and signing the contracts really represent extra work. In the course of the conversion the decreasing number of units working in the old form will mean constantly decreasing administration.

There are still significant reserves in abandoning superfluous, parallel operations and in exploiting the possibilities of simplification.

One of the goals of introducing the system was to bring in and use private financial assets. The business leaders have undertaken minor renovation, in a few cases more significant investments (for example, ice-cream machines and beer bars), and have undertaken to replace shop furniture. The contract leaders bought a part of the circulating assets or financed them themselves.

The size of the financial assets used by the entrepreneurs to finance circulating assets can be put at about 60-70 million forints. With the increase in the number of units working in the new form and with increasing confidence we can expect an increase in private investment.

In a number of cases we found improper enterprise practices in setting supplementary obligations ensuring the contract. The excessive sum set as property insurance greatly reduced the entrepreneurial spirit. In places the size of the sum demanded from those who were not enterprise workers (for example, a sum of 100,000 to 400,000 forints for the 3 month fixed fee) practically excluded outside bidders. It would not endanger the security of the enterprise and it would be in the interest of the business leaders if free financial assets were used to purchase the circulating assets, instead of using sequestered savings deposits for this purpose.

With the cooperation of the business leaders the management organizations have renovated some of the businesses more cheaply and more quickly. Because of the limited financial possibilities of the enterprises it is useful to refund the expenditures of the leader from the fixed fees--if the business leader undertakes renovation at his own expense.

On the basis of the experiences of the first year the pace of conversion must be substantially accelerated. We plan to hand over about 6,000 businesses in 1982. This is nearly three times the number of units handed over in the first year, which means an increased task for the ministry, the SZOVOSZ [National Federation of Cooperatives], the councils, the administrative organs, the enterprises and the cooperatives.

### 3. Further Tasks of the Conversion

In the interest of accelerating introduction and a wider arousal of entrepreneurial spirit the Ministry of Domestic Trade is increasing propaganda to popularize well functioning contract and leased businesses. In the months ahead we will organize consultations in every megye to clarify the problems and debate the tasks. The ministerial decree pertaining to contract operation will undergo minor modification.

It is an important requirement that every enterprise and cooperative evaluate in detail the experiences of the first year, the causes of achievements and problems, and work out conditions for a swifter pace of introduction.

Increasing entrepreneurial spirit is one of the most important tasks at the enterprise level.

--According to a representative survey only 17 percent of the business leaders are fully aware of the essence of the new operational forms. This shows that there is further need to organize study courses aimed at making the system known. In addition to expanding professional expertise an important goal of education is persuasion. It seems useful for the management organizations to take over the cost of the study courses in whole or in part.

--The advertising of businesses must be better concentrated regionally and by branch. Instead of sporadic announcements pertaining to only a few businesses a given region should advertise all businesses in the same branch at the same time. Experience shows that this increases interest and encourages the submission of bids.

--In the interest of creating longer-range interest we recommend that the agreements pertain to a 5 year-period. The longer contract period strengthens confidence and encourages the investment of larger sums by the business leaders.

The enterprises and cooperatives should review and if necessary modify the conditions for advertising businesses.

--They should strive for a realistic determination of fixed fees. Where it is not possible to put an end to deficit operation the fixed fee should not contain a profit component. Eliminating or decreasing the deficit also represents an increase in economic efficiency.

--The sum of the supplementary obligation ensuring the contract, or the security put up, should not exceed a value proportional to the real risk. Excessive requirements decrease the entrepreneurial spirit. Enterprise conditions should be developed in such a way that the "security" of the enterprise is based on the circulating assets financed by the business leader and not on the security put up. The management organizations should make use of different forms of the supplementary obligation ensuring the contract (sponsors, pledges, mortgages). A part of the bidders, experts without property, should not be excluded by too large a supplementary obligation ensuring the contract or by sticking to the need to put up security.

--In the interest of ensuring the goods and other stockpiles needed throughout the year the enterprises should agree on a supply of circulating assets of varying size. In the case of an especially seasonal business it may cause a problem if the management organizations adjust the quantity of circulating assets transferred to the business leaders to needs outside the peak season. For this reason it would be useful to fix an upper limit for fixed assets in the contracts. As needed--in return for payment of a use fee--the contract holders can raise the value of the circulating assets being used to the upper limit; then, when the need ends, they again reduce this through repayment.

--The management organizations--primarily in the foodstuffs area--should initiate the creation of acquisition associations. An association of business leaders or other organizational forms made possible by central regulations will facilitate a supply of goods for shops with one or two people.

--Insofar as the operation of a given business cannot be made profitable in its present profile the profile should be modified or expanded in the interest of creating conditions for profitable operation. It would be useful to review the operating permits of the businesses and if necessary the units should be advertised in accordance with modified operating permits.

At the time of the comprehensive evaluation of the annual work of the enterprises the supervisory organs should take into consideration the enterprise efforts and measures taken in the interest of introducing and successfully propagating the new operational forms.

Propagating the contract and lease forms--in accordance with the original plans--will take some time. But the management organizations should schedule the conversion so that the free cash box operational form can be largely liquidated by 31 December 1983 for urban fruit and vegetable shops and meat shops and by the end of the Sixth Five-Year-Plan elsewhere.

8984

CSO: 2500/227



OFFICIAL INTERVIEWED ON ENERGY MANAGEMENT PROBLEMS

Budapest NEPHADSEREG in Hungarian No 15, 10 Apr 82 p 3

[Interview with Gyula Czipper, director of the National Energy Management Authority by Gyorgy Toth; date and place not specified]

[Text] The rationalization of energy management cannot be separated from the production of our national income, or even our day-to-day life. Our country does not abound in energy carriers, and thus, our economy is sensitive to all changes affecting energy. How should we manage energy? This was discussed with Gyula Czipper, director of the National Energy Management Authority by our correspondent, Gyorgy Toth.

[Question] How is our energy consumption adapted to the production of our national income?

[Answer] All branches of the people's economy are energy consumers. Industry is responsible for 50 percent of our total energy consumption, transportation and agriculture for approximately 10 percent each and the population for the remaining 30 percent. To evaluate the energy consumption level, we first examine the energy percentage consumed for a 1-percent increase in the national income.

Based on international experience, if the mentioned indicator is less than 1 percent, we have an effective energy management. This indicator is between 0.6 to 0.7 percent in countries with advanced economies. The comparison, of course, requires thorough analysis. Energy consumption is greatly dependent on the production mechanism of the given country, its climate and the composition of the consumption. Our country--as far as its flexibility indicator is concerned--is in the middle of the spectrum compared to other countries. Only through improving our energy consumption efficiency can we move up to the front line.

[Question] What kind of energy carriers do we have to work with?

[Answer] Hungary supplies half of its energy needs from national resources and the other half by imports. This ratio varies depending on the price of energy carriers on the world market. At the end of the 60's and in the early 70's, we were planning to increase oil imports and neglected the production

of domestic energy carriers. Imports reached their peak in 1978, when we covered 55 percent of our energy needs from imports. But we would like to influence this process by our energy management program, since the increasing oil prices became almost constant. Thus our imports will be below 50 percent in 1982.

[Question] How have our geological resources shaped the system of energy-carrier production?

[Answer] In our country, we produce, among other things, 2 million tons of crude oil and 6 billion cubic meters of natural gas. Our reserves are short; so we cannot increase production. Only our natural gas production can be increased significantly, from natural gas containing inert gases, whose heating value is approximately 4,000 calories per cubic meter, i.e., one half of that of pure natural gas. Natural gas of this quality cannot be mixed into the national gas system due to its reduced quality. Thus it will be consumed by a targeted consumer. More exactly, we shall replace oil by this gas in the Tisza Power Plant. Our coal reserves would permit a much greater production than the one presently in effect. To accomplish this, however, we must open new mines. We have several programs for this, out of which the so-called eocene program is the most significant. Within its framework, we are developing the Komárom County coal basin. Two plants are already in operation. Coal has been brought to the surface first from the Markushegy mine, but even the Nagyegyház mine is producing this year. These deep mines contain good quality brown coal, most of which is used to supply the population, partly as classified coal and partly as briquette base material. By 1982, we are planning the construction of a factory in Dorog, Tatabánya and Varpalota, capable of producing 400,000 tons of briquette. A part of their base material will be produced by these two mines.

[Question] The saving of energy is an important part of energy management. How do we manage energy carriers from their production to their final consumption?

[Answer] The increase of the energy carrier prices, especially the price of oil, urged our country to prepare a separate energy management program, i.e., to put together a program in whose framework we adjust our energy consumption in a planned and conscious manner to the possibilities. The government established our energy management program in its December 1980 decision. According to this, we must moderate the rate of increase in energy consumption. Before 1978, the annual energy consumption in our country averaged 4 percent. Our goal is to keep this average value below 1.5 to 2 percent.

Another important goal is to reduce oil consumption. Five years ago, the consumption of this energy carrier was above 43 percent; according to our plans, we shall reduce this ratio below 30 percent. A part of our task must be implemented by organizational measures, i.e., by measures which eliminate or reduce obvious waste by improved labor organization, more professional equipment maintenance, more careful energy consumption.

The so-called energy rationalization measures belong to the second task group. In its framework, we shall initiate energy-saving investments; e.g., to utilize waste heat, to reduce the specific energy consumption of certain industrial processes, we can create the conditions of energy technology rationalization in a given plant by a more economical waste water management. We have a broad range of opportunities which offer significant energy savings via investment, further development and by improving the efficiency of the existing energy-consuming and conversion facilities.

The world-market price of metallurgical coke increased in proportion to oil price increases; for that reason, our program includes tasks to reduce its consumption. We are importing this kind of coke in large quantities, and thus the increase costs hurt us. Based on the program--especially in large metallurgical plants--we must save nearly 300,000 tons of metallurgical coke. As a first step to this end, we are developing the technology of pig iron production, especially by improving the energy efficiency of blast furnaces.

We also want to reduce heating oil consumption. To this end, the method of feed preservation without drying, i.e., wet feed preservation, must be used more and more widely in agriculture. Agriculture consumes 10 percent of the total energy. Most of this is fuel and heating oil, which amounts to 30 percent of the national consumption. It is important to reduce the quantity of oil burned by the utilization of agricultural and forest side products. In these two latter categories, agriculture moved ahead. More than 500,000 tons of heating oil must be substituted by the increased use of coal, natural gas and geothermal energy by the end of the sixth five-year plan period.

[Question] How can the energy consumption of the population be adapted to the possibilities of the people's economy and to our living standard and political goals?

[Answer] We can reduce the energy required for the central heating of newly constructed homes with increased heat insulation and the installation of hatches minimizing heat loss. We are planning on the separate measurement of heat energy and hot water consumption even in dwellings with remote heat and the billing of the individual dwellings instead of using lump-sum tariffs. Today's billing system does not encourage energy saving. This, of course, does not entirely depend on the residents: dwellings must be equipped with radiator regulators and devices accurately measuring the temperature.

[Question] Are rate increases or consumption regulation and the installation of measurement devices the most effective way?

[Answer] Prices are extremely important from the viewpoint of energy saving. But I must immediately add that the rates paid by the management organizations and the prices established for the population must be separated. The increasing of the latter can only be done taking into account living standards and politics. Energy management interests can only be satisfied with regard to this. As an example, remote-heat and hot water supply prices

can be maintained at a level corresponding to our living standard and politics. Subsidies will not be abolished in the future, and even if the cost of the services may increase from time to time, their price will not approximate the real cost of their generation.

As a national average, remote heating costs nearly four times as much as the amount paid by the population. Even domestic heating oil costs double for the people's economy than what it is sold for. This was the reason, among other things, for the increase in heating oil prices.

The energy management program involves the improvement of technical sophistication of household machines and equipment. Last year, we have completely stopped the manufacturing of televisions with electron tubes. Transistorized sets using smaller amount of energy can be purchased at approximately the same price as their predecessors. Energy efficient equipment appeared in the stores, such as washing machines and centrifuges. The benefit of such devices and equipment is two-fold: significant energy savings can be achieved through their use. And since they require less energy, the extra expenses relative to the consumer price increases can be somewhat moderated.

[Question] What are the tools used to achieve the energy management goals?

[Answer] One of the important elements of our tools: investments which serve energy rationalization can enjoy state support. During the sixth five-year plan period, we have budgeted 15 billion forints of credit for this type of investments. From this amount, about 7 billion forints are state subsidy, i.e., credits not to be paid back, which are available to the management organs through competitive selection.

[Question] What are the experiences of the implementation of the energy management program until now?

[Answer] The most significant achievement has been the moderation of the dynamic growth of energy consumption. Neither in 1979, nor in 1978 did the energy consumption of the country increase; furthermore, there was a 0.7 percent reduction in 1981 compared to the previous year. According to our plans, there will be no significant increase in our energy consumption this year. As a matter of fact, we shall consume 2 million tons less oil in 1982 than in 1978. Not only the effect of energy rationalization measures is demonstrated everywhere but in the meantime our economic growth also slowed down, and thus the energy needs of our people's economy have been moderated. It is important that we managed to achieve results precisely where waste has been the most conspicuous.

[Question] How can compatibility be achieved between our energy saving efforts and our possibly increasing economical growth?

[Answer] Our economic growth is more and more determined by energy consumption and the cost of energy supply. In certain branches, there will be sufficient amount of energy available under any circumstances. However, when we are planning our future, we must always consider the costs of energy



supply. We must strive for an economic development that would not require any more energy than necessary even for the production of articles that are competitive on the world market. Energy saving, however, must always be kept within reasonable limits. Our economic growth and energy management concepts can be made compatible in this manner.

9901

CS0: 2500/237

PROBLEMS OF INCREASING ENTERPRENFURSHIP ANALYZED

Budapest KULGAZDASAG in Hungarian No 1 82 pp 3-11

[Article by Kamilla Lanyi: "The Problem of Entrepreneurship in Our Economy"]

[Text] A whole series of government regulations appeared in recent months making the establishment and operation of small enterprises and flexible small entrepreneurships possible in the state, cooperative and private sectors. However, in order for the requirement of entrepreneurship to become commonplace in the whole enterprise sphere, significant changes in our economy's methods of operation would be necessary. At the same time, there appears to be an indispensable need for the clarification of some conceptions and the reconsideration of what we deem to be necessary, possible and permissible in a regulated market. This article is intended to be a contribution in this direction.

Towards the end of the 1970's, it became apparent that the methods and means with which Hungary had participated in the international division of labor thus far would no longer insure the international competitiveness—taken in the broad sense—of the Hungarian economy. Doubts also began to appear whether a restrictive economic policy carried out over an extended period by itself would be sufficient to reestablish equilibrium and to place the economy on a new stage of growth within the foreseeable future.

On a very wide scale, Hungarian economists have endeavored and are still endeavoring to explore the conditions for reestablishing the equilibrium and of initiating a new stage of growth. Economic policy problems, and within this, particularly the problems of development policy, economic mechanism, organization and of institution systems have emerged. Their discussions, for the most part, were carried on within the framework of responses to world economy challenges. At the same time, attention was naturally focused on the forms of interaction between enterprise and state economic direction, and also on how and in what direction these interactions are influencing enterprise behavior both on the internal and external markets.

The 1968 economic reform created the institution of the market in the enterprise sphere in Hungary, and established the conditions of competition among certain enterprises. The creation of the market institution in itself does not yet assure a well organized market, or its proper and trouble free operation. This can only be accomplished through a longer examination process and the introduction of numerous new institutions. The existence of the competitive status in itself does not equivocally determine in what, for what goals and with what means the enterprises will compete, and how competitive the forms they have available and with which they have experience will make them on the external market.

The examination of the total economy, and more specifically, that of the adaptation and entrepreneurial capacities of the enterprise sphere have led us to the problem of entrepreneurship, to the recognition that the organization, institutions and directive system of the economy are restricting and preventing, rather than promoting the advancement of Hungarian enterprises (including agricultural production units and monetary institutions also) as entrepreneurs on the market.

#### The Concept of Entrepreneurship

When we write about entrepreneurship it would be proper for us to attempt to clarify what we mean by economic entrepreneurship. What can the function of entrepreneurship in the economy be, and just what does an entrepreneur do?

Rather than give a definition, let us examine two very simple examples!

In our first example, let us imagine a very imperfectly operating market in which merchant "A" has a product for which the customers of whom he is aware are not interested in his product, or are only willing to purchase it at a price so low that it does not even cover his costs. On this same market there is also a potential customer "B" who needs just this product but cannot find it, or the shippers are asking a transportation charge too high to make the purchase worthwhile. If "C" becomes aware of the situation and buys "A"'s product at a somewhat higher price than the others had offered and sells it to "B" at a somewhat lower price than the previous best offer, then entrepreneur "C" by exploiting the information gap existing on the market may perhaps reap a large profit, while assuring the continued existence of "A" and "B" on the market.

In the second example, let us imagine a country which has a large polyethylene factory which exports all of the foil it manufactures. There is also a doll factory which imports all of the multi colored paper boxes it needs for its dolls. If at this point someone equips a plant which produced polyethylene bags with engraving and lettering in color to pack the dolls, and if the merchants and customers accept these, then the plant could be a successful entrepreneurship. It could grow to be large by also manufacturing special bags for soup vegetables, which were packed in netting before. It could continue like this until competitors arose.

The first example, primitive as it is, calls attention to the fact that entrepreneurship is always based on a market impulse. The entrepreneur seizes the opportunity provided by the market's given state—which is never perfect—and important roles are played by his attention, resources and information gathering capacities. The second example illustrates the relationship between innovation and entrepreneurship, and its characteristics of often producing further new activities. In the first example, the profit motive is clearly apparent. At the same time, an activity based on only profit making and market speculation contributes to the development of the market equilibrium. The second example rather brings out the elements of risk in entrepreneurship, and the characteristic that entrepreneurship can break down the previous balance, while at the same time initiate a growth process.

From our examples it is evident that capital is needed for entrepreneurship. But it is also evident that the entrepreneur himself does not have to be the owner of the capital. It also occurs to us that the entrepreneur needs information and also, in most cases, he needs to be able to mobilize certain resources (materials, machinery, manpower). Furthermore, entrepreneurship always adds some kind of new activity to the ones already existing. Where information gathering and transmittal are monopolized, where resources are completely distributed and where activities are determined once and for all there can be no entrepreneurship.

Thus, entrepreneurship is a market concept, on a market in which capital is also present. Perhaps there is not a single other function from which speculation, risk and profit acquisition are as inseparable as they are from entrepreneurship. Naturally, in a modern and properly operating market there is no possibility for the kind of speculation given in our first example, and profit cannot be reaped so easily. In a planned economy and in a regulated market, however, both speculation and the acquisition of profits can be restrained, regulated and narrowly channelled as desired. Within such a framework both activities, or rather behavior—that is, both speculation and profit acquisition—are indispensable constituents of the entrepreneurial process.

It is necessary to establish this because where there is entrepreneurship the question usually arises whether the entrepreneurial profit is deserved and well earned, or whether it arises from exploitation of some weakness in the market or market participants, that is, from pure speculation. It is worth noting that the more unregulated the market is, the greater the number of information gaps, the more uncertain the mutual relationships among the market participants (the more difficulty the buyers and sellers have in locating each other, the more defenseless situations exist, the less the market participants know about the conduct of their competitors) the more possibility there is for short term and perhaps destructive speculation, and the easier it is and less risks are involved in making a profit. A good example of this is the Western European agricultural market during the first half of this century.



Among the market functions of the enterprise and individual entrepreneurship is the one which is most closely connected to the concern for profits, that is, interest in acquiring as great a profit as possible. The success of economic entrepreneurship—in contrast to other economic functions—can be assessed only by the magnitude of the profits, since it has no other indicator of success. Perhaps it is not superfluous to mention that the current role of the enterprise in society's division of labor is much more complicated than to permit the restriction of its functions to entrepreneurship alone, or its motivations to the acquisition of profit only. All experience points to the opposite. But it should also not be forgotten that while in recent decades the methods and styles of entrepreneurship and ventures and the acceptance of risks have changed significantly in possibly all developed market economies, they will never be eliminated from enterprise life. In fact their role in recent years appears to be growing.

#### Problems of Entrepreneurship in the Hungarian Economy and in Economic Thinking

As we already mentioned, on an operating market the entrepreneur notices new demands and also how old demands may be met in new ways. In his perspective it appears that something can be produced more cheaply or something could be sold to someone which could not be sold to him before. Why is the state not capable of doing this?

The state is obviously unable to perceive the new possibilities as an entrepreneur. The state government, state direction and the central planner are not directly involved with the market. And why does the demand, or the possibility that something can be produced in a new way or can be marketed in a different way occur to them? Naturally it does occur to them, but in a different way. The chief indicator for the state is the shortage. The opportunities, or rather the missed opportunities are signaled by such aggregate indicators as growth rates, the balance of trade, the development of terms of trade and the population's unspent money. We should note that in this case the awareness—in contrast to entrepreneurial behavior—is always subsequent, and under the best circumstances can only take the form of a response and never the seizure of new opportunities. Let us also note that news of only the most important shortages, those which affect many, can reach the central government, which must then rank their elimination according to some scale of demand, especially if monetary investment or supplementary imports are required.

Entrepreneurship as a profit acquiring activity, and the entrepreneur as an activity expressing individual or as one managing a group interest also present ethical problems. Thus, values are attached to the concept of entrepreneurship. Some of these ethical problems can also be generally raised about the market economy (along with the institutionalization of exchange through the market, or the exchange of operations and activities). Without attempting to outline the varied history of these ethical problems and solutions, we would like to remind the readers that under the

circumstances of today's capitalist economy, the exploitation of economic superiority on the national and international scales and the despotic decisions of the large enterprise managers and state bureaucracies which affect the environment and the living conditions of large masses of people, and their methods which influence consumer behavior have been condemned both as market morals and as immoral in themselves.

Thus entrepreneurship also involves value conceptions. In today's socialist economies—chiefly for historical reasons—entrepreneurship is not valued very highly. It is not related to organizations and institutions which have been considered prestigious until now—the experience has been insufficient, and from the theoretical standpoint, it has not been clarified how it could be so related. Thus we should not be surprised if the need for entrepreneurship so far has been formulated in relation to activities, organizations and social groups which are either on the lower level of the value hierarchy, or are considered as temporary, tolerated phenomena by society, as tactical elements in economic policy such as: among enterprise activities, the servicing of large enterprises (background industry and services; in terms of enterprise size, the small plants, cooperatives and small private artisans; as far as form of ownership is concerned, cooperative and private entrepreneurs; from among the social spheres of operation, the entrepreneurs of the so called second economy. Perhaps it would not be superfluous to mention here the Soviet trusts on the early twenties, which operated as profit making entrepreneurs without a framework of welfare and supply, and with less social responsibility than today's Western European state enterprises. From this we may immediately conclude that it is not the socialist state property institution which automatically eliminates entrepreneurs and the operating conditions of the market.

If the need for entrepreneurs is characteristically attached to small scale ventures, it has what appears to be an objective cause. The current work organization and technology in large industries of even capitalist countries makes it possible for only a narrow group of the enterprise leadership and ownership level (management and directing councils) to perform its activities—at least partly—in such a way that the success of the entrepreneurship becomes the personal success of the entrepreneurs. Often, even in capitalist countries, entrepreneurship on the massive scale can be found only in a competitive sphere maintained artificially, or at least through unusual means—in a classical competitive sphere, as Galbraith calls it. The survival of this characteristically small scale owner and small enterprise sphere had been subsidized in the past chiefly for political or more for ideological reasons—in addition to the economic reasoning only recently recognized—as symbols of open competition, free enterprise and of completely private property. As similar symbols, the small enterprises in socialist countries often and for a long time came under a variety of restraints and restrictions, and often even became problems to be handled by the police. Among other reasons, this is why every effort which attempts to resolve or even initiate entrepreneurial values and entrepreneurial activities in areas which are secondary in importance and prestige, or which do not present

compatible solutions in terms of forms of ownership or ownership organization (especially an organization representing or handling state property) are received with such well founded hesitancy.

In order for there to be entrepreneurial enterprises, groups of enterprise leaders, capital owners and certain individuals with the appropriate capacities must exist.

In the current economy, ownership and entrepreneurship can be wholly or partially separated from each other, but can be distributed among owners (share holders) and entrepreneurs (managers), or rather, their associations. As far as the Hungarian economy is concerned, when recommendations about ownership organizations independent of state direction emerge, these implicitly postulate exactly the distribution of entrepreneurial activities and profits. It is evident that entrepreneurial activity is alien from the ownership body represented by state directive organizations (ministries, councils). There is also no method by which this body can acquire income from entrepreneurial activity. If these cannot participate in either risks or profits, ownership supervision and oversight can only be assured if the enterprises which are in possession of state property, are operating with it and may detach part of it, while not themselves accepting the risks or entrepreneurial profits, share in the responsibility and commitment which the state as owner has towards society.

An ownership organization independent of state direction would be suitable for sharing the risks and profits of entrepreneurship—no matter what given size or extent—with enterprises irregardless of how the entrepreneurial role is divided among them. The prime social condition for the operation of such an independent ownership organization would be the development of a strata (technostructure) which would receive justification for its existence and prosperity from the rest of society for the performance of the entrepreneurial function (ownership and management) and the success acquired in it. The members of this group would be mobile compared to the other ownerships, or rather, owner representative groups (leaders of cooperative and private venturers, representatives of cooperatives and their chambers), but the exchange of places between these and representatives of political power could only be a rare exception.

This technostructure could evidently coexist with the more unusual forms of groups of small ventures and could also survive on a market on which both written and unwritten rules predominate (with the exception of laws which limit monopolies).

#### Some Problems with Small Ventures

We naturally did not intend to disparage the importance of small ventures with the preceding. Their value and shortcomings are especially noticeable in an economy which is characterized by the numerical majority of large organizations (that is, there are only a few medium and small enterprises both in the state and in the cooperative sectors) which do not at all or



hardly operate as entrepreneurship, but rather expect both initiative and recognition of their significance from the government. (In our economy, for example, in the form of the state assuring the necessary profits for survival and growth)

The chief advantages of small ventures are usually said to be their mobility and their need for only small amounts of capital. Also in the realm of these characteristics, they would exempt the state and its large enterprises from numerous supply responsibilities, would create and continually re-create the background industries for the large enterprises, would satisfy an important part of the continually changing demands of the population and would free the state from many imports which appear to be unnecessary.

Also usually mentioned among the advantages of small ventures is the fact that their possible failures and bankruptcies do not project a very large burden on society. We know from the literature that in capitalist countries a large number of small ventures begin and end annually, and that during their lifetimes a portion of workers and employees will try independence at least once. Many of these workers are heads of families who are engaged in part time small scale farm production. After experiencing a failure in a small venture, these people find themselves employment again without a great deal of anguish.

Among other things, these observations supply evidence for those Hungarian economists who are desiring to provide a free rein to private entrepreneurship for individuals, families or for cooperatives consisting of a few persons. Relatively little has been said about the fact that occasionally an entrepreneurship started with the least possible capital can become very successful, and that there is the possibility--and the possibility must be there--that some small ventures may grow to be mid sized or even larger entrepreneurship. It will depend on economic reasoning and social opinion just how large and how important private capital belonging to an individual or a group may be allowed to grow, and where the boundary will be at which the taxing of profits must be replaced by making the entrepreneurship a cooperative or by nationalizing it.

A different problem area than that just described is the well known rigidity of the enterprise size structure, the rigidity of the size of operating state and cooperative enterprises under the current and already existing legal and organizational framework--which developed as a result of economic policy endeavors and official decisions during the last three decades. The problem is that in Hungary there are very few mid sized enterprises in either the state or the cooperative sectors, and small enterprises are virtually nonexistent.

The lack of entrepreneurship or their insufficiency cannot, of course, be attributed to this. In addition, the fact that in the last 13 years among the small number of mid sized and small enterprises there were state



enterprises and cooperatives which displayed entrepreneurial behavior in no way indicates that in an economy in which the market entices and forces enterprises to entrepreneurship small size in itself is an advantage. Since there is sufficient literature on this problem it would perhaps be enough to note that the large enterprises, because of their greater capital resources, information bases and risk taking capacities notice, seize and are able to exploit other possibilities than the small and mid sized ones. Usually the market position and the extensive system of relationships of the large enterprises—meaning also its special relationships with the state (and perhaps also with multinational enterprises)—can and do play important roles.

Mention is made rather that in circumstances under which large enterprises could also participate in entrepreneurship, the lack of mid sized and small enterprises could lead to the breakdown of the economic equilibrium, if the large enterprises were to withdraw their capital rapidly from all the activities which they are performing in place of non existent small enterprises out of constraint or because of the lack of anything better. It is possible, however, that on the long run the only sensible capital investment for large enterprises and banks could turn out to be the institution of smaller enterprises. This could be a healthy process, but it could also be accompanied by the squandering of part of the accomplishments of research and development. Thus many recommend that the dismantling of at least those large enterprises which can be viewed as artificial according to market criteria be a state task, and that it should be accomplished before enterprises in general, without regard to size, can establish the institutions of entrepreneurship.

Today many economists agree that the development of a healthy enterprise size structure cannot be the direct result of state action. On an existing and operating market, the cooperative and competitive relationships and the constant changes in these relationships among different sizes enterprises must elicit the growth, cessation, merger and dissociation of enterprises, as well as the impulse to establish new enterprises. State interference ought to be directed only towards market regulation and the maintenance of uniformity in the enterprise sphere, in order that individual enterprises or enterprise groups reach or not exceed their desired size.

#### Entrepreneurship and Its Methods of Integration into the International Division of Work

One of the most distinguishing characteristics of the enterprise sphere created by the 1968 reform is that Hungarian enterprises are expending more systematic effort on their markets on the input side than on the output side. There is more vigorous competition in demand than in supply. Enterprises are competing to win sellers with more varied methods than they are competing to retain buyers. The Hungarian enterprise which is counting on appropriate cleverness in creating a demand and on adaptation to shortage situations created by others—that is, it can be sure to be competitive on the domestic market—turns out to be rather helpless on foreign markets where competition in supply is still dominant today.

Because of the nature of entrepreneurship, the entrepreneurial enterprise can only create a demand the satisfaction of which is assured on the input side, or it creates a new entrepreneurship. On the output side, the entrepreneurial enterprise itself satisfies the demand, since this is what constitutes its entrepreneurship. This is the approximate thinking on the basis of which we can expect that if entrepreneurial activities become general in our economy, domestic shortages would significantly decrease and the competitiveness of the enterprises on external markets would have to increase significantly.

Beyond this, the requirements of entrepreneurship, or rather, its potentialities can be related in many ways through the method of an economy's participation in the international division of labor. We would like to focus attention here to only a few of its aspects.

One country's capital, land, material and human resources are at any given moment finite. Entrepreneurships just beginning will tie down a portion of these resources for the performance of a new task, which in itself may give rise to further new tasks, which will require capital and resources again. It is true that successful entrepreneurships must increase the total amount of capital and resources found in an economy. The price of this increase, however, is that the entrepreneur foregoes other activities or draws capital and resources from them despite the fact that the need for the fruits of these other activities has not ceased to exist.

Meanwhile, the structure is changing in two directions. New activities and new kinds of relationships among these activities are arising, while others—at least within a given economy—are ceasing. Thus, either the capital, part of the resources or the products lacking because of activities which have ceased, but for which there is still a demand must be acquired from the external markets. Other products and perhaps resources must be sold on the external markets.

It is clear that the structure modifying effects of entrepreneurships can only take place in an open economy, provided that we view the satisfaction of domestic demands and international competitiveness as the measures of entrepreneurial effectiveness.

This is not only relevant to the possibility of import competition, although—discounting several branches and activities protected in a protectionist way by economic policy—the value of import replacing entrepreneurships can be evaluated only through effective import competition. The more important standpoint, however, is that while only insignificant entrepreneurships are possible, while entrepreneurships cannot initiate processes which lead in the direction of sensible specialization and optimum size of a series, the domestic market is institutionally not open. The institutions of an open economy must be established in order for entrepreneurial behavior to become common in the sphere of market participants.

Moreover, today we are more or less at the point where rapid structure modification can only be imagined if entrepreneurial activity becomes common throughout the whole economy. Beyond the world market price explosion of the seventies and the recession which struck the capitalist countries, most economists contend that the era in which a moderately developed small country, while slowly improving its price structure, foreign trade organization and its trade and operating methods could generally maintain its position or its traditional markets and could assure for itself the necessary external resources for its planned or desirable development, while world trade develops rapidly and evenly are gone for a long time. The variability of the market, the vigorous price changes, the sharpening competition, the recurring drops in traffic, the appearance of more and more new countries on the markets of traditional or so called backward industry branches and the placement of more and more new industrial branches among those protected by backward, so called periodic protectionist methods appear to be permanent tendencies today.

In the development of international economic relations other processes which may be said to be untried for the Hungarian economy thus far can be discerned. In the international division of labor, increasingly greater portions of the exchange of goods is being realized by the international flow of production factors. In addition to cooperation with foreign enterprises, long term relationships among enterprises of various countries are increasing, and in certain industry branches are of fundamental importance. If it is a matter of a new technology, the development of new manufacturing branches, the exploitation of large scale natural resources or a business which can only be accomplished with the cooperation of principal and subcontractors and a large number of suppliers, the participants are often determined through fierce competition from the international realm, and the business is underwritten by international financing. New types of inter enterprise relationships and vertical integrations are coming into existence, especially among the enterprises of machinery (machine tool) and electronics industries. The multi nationalization of many branches which heretofore only operated within the domestic framework can be considered a new phenomenon. The continued increase of small multinational enterprises is changing the structure of the market significantly. These phenomena are modifying the relationships between buyer and seller and between the organization of trade and marketing methods. In the opinion of some, the sellers appearing on the world market are systematically divided onto the ones that keep up, or those which can recognize the advantages of new methods, and the outsiders, the group relegated to backwardness. Only enterprises which are flexible, capable of action and entrepreneurships which can integrate themselves into these processes can realize the accompanying advantages.

It appears sufficiently clear that in an open economy in which the direction of structural change is also influenced by the possibilities of entrepreneurship the factors to be taken into account in the formulation of state structure policy and the means of implementing structure policy are different than in an economy in which in practice every capital allocation is a result of central selection.

Likewise, where production factors either visibly or invisibly overstep national boundaries, where enterprises are aligned into ever newer formations on the international scale, only with different methods than before can the state assist and direct its enterprises to integrate themselves into the new processes taking place on the world market in such a way that the implementation of its economic policy is promoted.

A no less important result of the operation of the entrepreneurial enterprise sphere is that it is capable of continually relating economic policy conceptions and can provide responses to world market challenges beyond merely adaptations to already completed or registered processes.

9093

CSO: 2500/196



## MAV DIRECTOR DISCUSSES RAILWAY TRANSPORTATION POLICY

Budapest KOZLEKEDESTUDOMANYI SZEMLE in Hungarian No 3, Mar 82 pp 93-96

[Article by Zoltan Szucs, director of the MAV [Hungarian State Railways]: "Railway Transportation Policy," a speech given by the author at the Seventh National Transportation Economics Colloquium, Győr, 1 October 1981]

[Text] The changes taking place in the development of the national economy and in the world economy and the increasing international division of labor mean ever new tasks for the railways also, from both the quantitative and qualitative viewpoint.

On the basis of the significant changes which had taken place already in the division of labor of the transportation system of our homeland it was possible to think, 12-15 years ago, that the swift development of highway transportation would influence to a much larger degree than at present the freight market situation of railway transportation.

Recent years, however, did not justify this hypothesis. Despite the fact that the freight market share of the railways declined somewhat as compared to highway transportation, the oil supply problems have again directed attention toward the railways.

The passenger and freight transportation needs of the national economy are such, in regard to their size and composition, that, even with a dynamic development of highway vehicle transportation, they cannot be satisfied without a gradual development of railway transportation and a modernization of its organization and technology. Thus the railways continue to form the backbone of the transportation network and it follows from this that they are a very important tool of the economic policy of the country.

We have undertaken to develop the railways in accordance with the level of the surrounding countries; development and electrification or even simply maintaining the level in a dynamic way result in capacity growth. So we must strive to exploit this increasing capacity. At present there are still ample opportunities for this in the Hungarian national economy.

In the interest of this we must increase the quality of rail services, in every area and in every respect, but in the interest of this we must also employ economic tools, fee policy and state intervention, and must harmonize

the capacity of the various transportation branches. And finally, one can imagine the use of administrative tools also--the use of diversions and restrictions.

It would damage the national economy if the railways, representing fixed assets of about 140 billion forints, were not used to the maximum extent; but it might be even more damaging to think that if the performance of the railways did not increase then they need not be developed at the planned rate. This would be accompanied by a great decrease in the efficiency of the railways and the technical backwardness could be overcome only over a longer time.

We have defined railway transportation policy--which is an organic part of the general transportation policy worked out for the entire domestic transportation system--in accordance with this interpretation. Our long-range tasks are adapted to the national economic needs, which make necessary comprehensive, complex development and the organization of the entire domestic transportation network into a unified system.

The following appear as especially important tasks in the complex development of transportation:

--creating a purposeful and economical division of labor between railway and highway transportation, in accordance with the fundamental goals of the transportation policy conception; and

--proportional development of track, vehicles and junctions in railway transportation, in accordance with the ability of the country to bear the burden.

The fundamentally important viewpoint in the transportation division of labor is that, because of the energy supply problems, that sub-branch always carry out the tasks within the transportation system which has the smallest specific energy needs and costs and which can aid an improvement in the balance situation of the national economy most effectively, with its economicalness and its earning of foreign exchange.

When establishing correct ratios for railway and highway transportation one must consider also that because of the increase in the number of highway vehicles, and passenger cars therein, there are difficulties in conducting highway traffic, and we have energy problems also.

These difficulties of the transportation system can be solved by developing and by making increased use of railway transportation, which moves on fixed track, can be automated and has great capacity for moving masses of people and goods.

After this introduction, our most important goals can be outlined as follows.

In passenger transportation we must improve conditions for commuter traffic; we must make fast, comfortable travel possible for those going to work or school. In addition to the commuter passengers, of crucial importance, we

must turn great attention to satisfying the needs of those traveling for recreational, tourism and cultural purposes. We must expand international travel possibilities and further increase the number of domestic express and fast trains.

As the 5-day work week becomes general we must work out schedules and plans for equipment turnaround, traction use and personnel assignment which will make it possible to continue to get people to work without delay in factories and enterprises working continually. Together with this we must ensure that those travelling for cultural, tourism and other personal reasons, which can be expected to increase, have favorable conditions for their travel. We want to provide new possibilities to expand direct links between the larger cities.

In the interest of decreasing travel time we plan to increase the speed of trains on main network lines to 100-120 km/h and on the main international lines to 140 km/h. Naturally the energy conservation measures may influence all this.

In regard to freight transportation it is necessary to increase our participation in the international transportation division of labor, in order to improve the foreign exchange management of the country. This task will stand in the center of our freight acquisition activity--due to the world economic recession and the resulting temporary decline in transit freight.

In domestic traffic we must strengthen our freight market situation so that the railways should have a share of the total freight needs of the economy which will ensure the perfect satisfaction of the freight needs, in time and space, and a high level and an even as possible use of railway freight capacity, decreasing the specific values of our costs and ensuring higher productivity for the work of railway workers.

In the interest of all this we place especially great emphasis on containerization--in cooperation with the transportation sub-branches--which thus far has won substantially less scope than needed.

We must decrease the time cars are held at border stations and marshalling yards, and we must accelerate the flow of trains on the lines.

The goals outlined above can be realized only with a modernization of rail traffic technology, the technical tools and the organizational structure. It is already characteristic of the situation that we can handle the traffic appearing with the tools available only at the price of great difficulties. The significant backwardness appearing in network development is causing especially many problems.

But the development of railway transportation means not only a modernization of technique and technology. In the present system of economic guidance, in which the railways perform their tasks as an enterprise of public interest, a new form and content must be given to contacts with the traveling public and those providing freight.

Our chief goal is to satisfy the needs of travelers and those shipping goods to the fullest possible extent at a level which corresponds to the desires of those using the services of the railways, while also meeting the requirements for economicalness.

We will strive to spread this attitude throughout the MAV because only thus can we satisfy the needs and only thus can we win recognition for our work.

To realize the goals outlined above in harmony with the requirements of the national economy we are rank-ordering the developments needed in railway transportation--because of the limited material possibilities available--and we are putting in the foreground those investments which can ensure most effectively the realization of our appointed goals.

The present situation of the railways is characterized by a relatively favorable supply of vehicles, in contrast to the considerable backwardness of track, junctions, marshalling yards and signal equipment, which cannot be soon overcome under the present economic conditions of the country and, naturally, of the MAV.

The MAV conducts about three-quarters of all its traffic on main lines. In accordance with this a renewal of the main lines--the so-called trunk network--stands in the center of the network development tasks at this time together with a modernization of the marshalling yards and, to a lesser extent, an expansion of the track network at stations.

In order to ease the energy management problems we are electrifying about 280 kilometers of track and acquiring 115 large-capacity electric locomotives. In the interest of final liquidation of steam traction we will place into operation 74 newly acquired diesel locomotives--in addition to the electrification plans.

We will modernize 1,300-1,400 kilometers of track; we will install self-operating blocking devices on 440 kilometers of line and we will install new signal equipment at 33 stations. We are acquiring 15 motor cars, 307 passenger cars and auxiliary motor cars and 3,000 freight cars.

But we must note the circumstances that in regard to modernization it is not only ensuring financial resources that causes difficulty; difficulty is also caused by the shortage of the necessary materials, tools and construction capacity.

Our possibilities for renewing our less used lines are very limited. In order to realize a rail materials management policy and a thrifty investment policy we worked out methods to re-use the "48" system roadbed salvaged from modernization of the main lines. We plan partial rebuilding of the less used lines with this simplified line renovation; not only will this increase the safety of travel but it will make possible the use of uniform, 200 kN axle load vehicles.



In addition to ranking line modernizations according to the viewpoints described we are taking into consideration economic policy goals and the central measures defining the infrastructural development of our homeland.

The new requirements being made of railway tracks require a stronger roadbed structure. In the interest of this we want to make wider use of track made from 60 kilogram per running meter rails; we will further develop the reinforced concrete tie system and modernize rail reinforcement procedures.

The majority of railways are in a developmental phase which is characterized by an effort to improve the level of passenger and freight services, use technological innovations and introduce new traffic technologies associated with this. The concrete sites of installations needed to realize this are the large railway junctions--among others.

Unfortunately the present status of the junctions of the Hungarian railway network is not satisfactory. The destruction caused by World War II can still be seen at the railway junctions. Much of the junction track network still operates in the old system and the tasks, which have increased manifold, must be carried out in part with obsolete equipment and installations. Going beyond the problems of developing the track network, most stations have a shortage of platforms and pedestrian underpasses; the station buildings and other superstructures are obsolete; modern signal equipment is still lacking at many stations.

The chief reason for the backwardness which has developed at stations, marshalling yards and junctions is that we had to use the available financial resources and labor primarily on line work of various types to assure the safety of passenger and freight traffic and meet the increased tasks of the railways.

This method of development meant that some of the lines were rebuilt, they got modern signal equipment and the lines were electrified in a number of places; at the same time the reconstruction of the junction stations was neglected, and now this is causing capacity problems. Because of our limited investment frameworks we will not be able to resolve this tension in this plan period.

Among the large railway junctions we must stress the greater Budapest junctions and the most important border stations. Because of the nature of the Hungarian railway network, the geographical situation of the country and the links to the trunk networks of European railways these are of special significance.

Some partial modernization has been done to the greater Budapest junctions in past decades. But we can speak of larger developments only in the case of the Budapest South and Budapest West rail yards.

In the years ahead, unfortunately, reconstruction in greater Budapest will continue at an inadequate pace and will be concentrated primarily on work connected with the new railway-metro links. We will continue reconstruction

of the Budapest-Kelenfold rail yard and will begin modernization of Budapest-Ferencvaros, our largest marshaling yard.

Our most important junction from the viewpoint of the railways and our entire economy is Zahony. Development and expansion of this will continue in the years ahead, which is certainly justified by the constant and significant growth of Soviet-Hungarian trade.

In regard to junctions inside the country the greatest work of the past decade was that at Szolnok. Within the framework of this we created one of our most modern passenger stations and marshaling yards, including construction of a new station building. Significant modernization work is being done in Debrecen also.

Reconstruction of the other junctions of the network represents a very great task also. But for the time being we cannot provide the material resources for this. Despite this the MAV is seeking a solution so that in the future the problem of the large railway junctions can be solved in accordance with their economic significance.

Speaking of the management, commercial and business policy of the MAV it can be said that in recent years the quantity of goods hauled by the railways has stagnated, the drawing power of the railways has not increased. But because of the gradual increase in the price level our costs have increased sharply. This circumstance, naturally, is very unfavorable from the viewpoint of the national economy and the enterprise alike. We must counterbalance this primarily by reducing expenditures and increasing freight and passenger volume.

We must ease the effect of the increase in the price level with technical development, by developing a more favorable energy structure through electrification and dieselization, by saving the wages of manpower freed by installation of line and station signal equipment and by complex mechanization of track maintenance, reloading and humping work.

In order to create harmony between the sales receipts representing the countervalue of our services and the costs of our operational performance we need to develop a fee regulation policy which reflects the justified expenditures arising in the performance of railway passenger and freight services, which ensures the financial side of enterprise self-financing and which contains an honest profit component.

In accordance with this goal we must develop a fee system for the MAV which makes our services competitive; our fee regulation should adapt flexibly and quickly to the foreign and international fee system.

The basic principles of our commercial and business policy derive from the requirements of social development, the economic situation of the country, the development of the international political situation, interstate contacts and the competition of the railways with each other.

Among the goals of our commercial policy we place emphasis on a commercial view pervading the activities of the railway as a whole and on the development of partner contacts based on mutuality and equality. We want to improve our competitiveness by propagating modern transportation methods and improving the level of our services, with effective market research, activity to acquire traffic and advertising the advantages of railway travel and shipping.

We are devoting special attention to an effective transportation division of labor between railways and highways--in the interest of a fuller satisfaction of the needs of shippers.

In the area of freight shipment it is important to improve the quality of service and satisfy needs going beyond the so-called basic activity--for example, official weighing and unit counting.

We plan a further development of traffic on industrial track by encouraging the creation of new industrial tracks and improving service to industrial tracks.

The gradual development of a regional station system, the creation of concentrated freight handling sites and improving the technical equipment for sites handling containers are under way. We are working on the creation and introduction of foundations for a guaranteed car assignment system.

In the course of the Fifth Five-Year-Plan we worked out the most important guiding principles for organization development and we expect from these a substantial improvement in the guidance and operations work of the MAV. Execution of the tasks contained in the organization development program is not yet completed but the results thus far are reassuring. Among the most important organizational developments realized thus far we might mention that we have created a uniform operations service in the organization of the Directorate General and the railway directorates and we have modernized the operations guidance organization. Creation of a regional operations managers system throughout the network is nearly complete.

We have developed a combined machinery and vehicle maintenance service and the construction industry organization of the MAV has been centralized. In order to relieve the burden on the Budapest Railway Directorate we modified the borders of the railway directorates.

As a result of the organizational measures taken thus far our car management has improved, our contacts with shippers have developed more favorably, the use of modern freight techniques has increased and the speed of freight flow has increased.

We plan to create a uniform organization to guide and lead the construction, supervision and maintenance of fixed installations (track, superstructures, telecommunications and signal equipment and overhead electric lines) in connection with which we would like to re-regulate and simplify the investment activity of the MAV.

In parallel with the full development of the operations managers system we are organizing the way in which they will function, their management activity, a way to evaluate their work and conditions to create incentive; we will increase their independence and self-initiated activity.

We will continue to modify the activity of the functional organs of the Directorate General and the railway directorates in accordance with changes in the economic guidance system.

We are studying the traffic on the little used lines operating uneconomically, keeping in mind energy conservation and the interests of the shippers. We are preparing the traffic structure changes planned in some areas very carefully and with the appropriate justification.

We must improve cooperation between MAV and the VOLAN [highway transport enterprise] with a mutual assurance of the organizational, technical and technological conditions. This task will make necessary—at a pace depending on the material possibilities—the modernization of the freight handling equipment at our regional stations.

Realization of this railways policy conception, outlined in general terms without trying to be complete, and of what is contained in it will require a long time. It will make necessary consistent work, a concentration of the forces of the railways as a whole and better cooperation with the traveling public and our shippers, with a mutual understanding of each others' problems.

A harmonization of national economic interests and the properly conceived interests of travelers and shippers, of the railways and railway workers, stands in the center of all our work. In every area we will strive to improve the level of our services, to provide fast, comfortable travel to the traveling public and to satisfy every shippers' needs, if possible without delay; and we will strive to create ever better working conditions for our railway workers.

8984

CSO: 2500/230



## CATEGORIES OF AGRICULTURAL COOPERATIVE STUDIED

Budapest TARSADALMI SZEMLE in Hungarian No 4, Apr 82 pp 3-19

[Article by Ervin Zsuffa, deputy department head of MSZMP Central Committee]

[Text] It is a view already accepted in practice that a natural phenomenon of economic life is a varying rate of development and an evident differentiation in its wake. And still this subject area evokes a great deal of debate in agriculture, and this is understandable: the problem is complicated and contradictory. It can be ascribed to this that there is no agreement even over apparently simple questions as to whether the differentiation has increased or decreased. Because of the recurrence of the tensions, new measures for their solution are inevitable, for we are speaking here of a constantly changing phenomenon.

## Has Differentiation Increased in Agriculture?

It is impossible to give a definite answer to this question, which is often posed, because even the way it is put is inaccurate. In order to give a correct reply one must know what economic category we are speaking of. But if we approach the subject in this way, we will receive very different answers.

For example, it is clear that the differences have increased in the level or dimensions of production. We are not surprised to hear that on one farm production value is on the order of billions, while on many cooperatives a realistic scale is a million forints. Differentiation has also increased in farm revenue and production. The strongest farms reckon their results in 100 million forints while at the same time 151 cooperatives were obliged in 1980 to leave this side of the balance ledger empty. It is noteworthy, however, that in personal incomes a narrowing could be demonstrated although very small in extent. This is indicated by the fact that in cooperatives belonging to the "low" revenue-level category, per capita income increased by 126.1 percent between 1976 and 1980 and on cooperatives with "high" revenue level it increased by 123.9 percent.<sup>1</sup> Detailed study affirms this finding.

1. On basis of the write-up by MEM STAGEK [Statistical and Economic Analysis Center, Ministry of Agriculture and Food Industry] those cooperatives were placed in the "low" category which gained 6 forints or less at a cost of 100 forints. We may regard as "average" the farms which realize results of 6.10 to 12 forints, and those farms belong in the "high" category which gain results of 12.10 forints or more for 100 forints of cost. In the following I shall use these classifications unless otherwise indicated.

The growth rate of personal income declines consistently in sliding up the scale from the lower income level.

Interestingly, one index which indicates efficiency--results for 100 forints of cost--showed a moderate convergence between 1976 and 1980. The ratio of the "low" revenue group dropped from 33.3 percent to 30 percent, the "high" dropped from 42.3 percent to 41.6 percent, while the medium increased from 24.4 percent to 28.4 percent. Obviously the decline in the number of low revenue-level producer cooperatives was favorable. Some cooperatives were unable to counter the withdrawal measures. It is food for thought that the decline was chiefly characteristic of cooperatives with a once "high" revenue level but unfavorably endowed. The number of remaining (well endowed) farms belonging to the strongest group increased from 483 to 487 despite the changes that occurred among them.

The differentiation, it should be noted, is not a constant condition, and in fact the processes are not unidirectional. Simultaneous with the differentiation there are factors which exert influence toward a levelling in economic life. Thus the economic always reflects the results of various, frequently contradictory processes.

The ratio of weak, medium and good cooperatives is more or less constant. The data given above also illustrate that the ratio of the individual groups was modified over 4 years only by 2 to 4 percent. It is surprising, however, to see how great the mobility has been behind this apparent stability. Only 49 percent of the cooperatives maintained in the base period the place they had, 24 percent moved into a higher category, and 27 into a lower one. And these numbers refer only to a rearrangement in three groups! If we increase the number of groups to six (and this is still not a detailed breakdown), it is evident that 30 percent of the cooperatives remained in their original place, 36 attained a higher and 34 percent a lower revenue level. We must weigh the fact of a rapid and continuous change rearrangement, particularly during changes in the economic regulator system.

The trend that was developed earlier and consciously supported has continued, therefore, and economic policy allowed a growth of differentiation appropriate to efficiency differences, but in the case of personal incomes it strove to moderate unjustifiable differences and to prevent tensions. This statement is supported by data in Table 1.

Table 1. The Differentiated Development of Agricultural Producer Cooperatives in the Fifth Five-Year Plan Period

Classification		Low	Medium	High
		Data on revenue-level groups in percentage of average		
Production value per worker	1976	86.5	101.7	106.2
	1980	83.0	101.7	107.3
Results according to balance	1976	15.6	79.0	156.9
	1980	7.3	87.3	153.1
Personal income	1976	87.5	97.8	108.2
	1980	88.3	97.2	107.2

Therefore, practice corresponded to our efforts in respect to the main processes, but we still had to modify regulation. The cause of this was that despite the lower production level personal incomes could actually be increased at the cost of accumulation. Thus such differences developed in the development sources as would have led in following years to a broad scope of economic difficulties.

Table 2. Development Source Per Worker and Its Debit (1980)

Classification	Low	Medium	High
	Revenue level group (in forints)		
Profit branch development funds	1,927	9,197	16,877
Amortization	15,111	15,030	16,449
Combined:	17,038	24,227	33,326
Debt Obligation on the development fund	27,660	21,855	17,252
Obligation in percentage of the entire source	162	90	52

From data in Table 2 it is evident that under unchanged conditions the low revenue group would not have much chance of holding its ground in economic competition. The tension is still greater if we reckon with the fact that in judging cooperative credit requests only the development fund that is formed from profit is taken into account. And its distribution is strongly differentiated. In 1980, for example, at 30 percent of the cooperatives 4.5 percent formed funds, whereas 42 percent of the strong farms had 69 percent of the development fund. Most of the farms belonging to the low category have little in the way of eigen sources, and they have no real possibilities for receiving development credits. And without development (which does not unconditionally mean expansion) the maintenance of production and particularly of the revenue level is difficult to conceive.

It is a problem or a fact, therefore, that the weaker farms have in effect no possibilities for development. There are some who question whether this is, in fact, a problem. It is theoretically right to raise this question because it is our goal to realize a difference in achievement and that the units which are operating more effectively should have an advantage. Undoubtedly, however, the efficiency indexes of cooperatives working with a higher profit ratio are more favorable. This is shown by data in Table 3.

Table 3. Several Indexes of Achievement Differences (1980)

Classification		Low	Medium	High
		Revenue-level group (in forints)		
Per worker	production value	214,002	268,708	293,082
	gross revenue	38,843	65,190	85,370
Per 1,000 forints fixed assets	production value	800	1,008	1,009
	gross revenue	145	245	294
Per one hectare producer area	production value	22,030	33,491	36,201
	gross revenue	3,999	8,125	10,545

The figures show a clear trend. And still the view, which causes so much uneasiness among those affected, that the development of low revenue farms, or their level maintenance, is unnecessary is debatable. After weighing the problem from various aspects, the Politburo took a position by development. The political motives of the decision are perceptible. It can lead to social tensions if several hundred large agricultural farms, about one-third of all the farms, drop more and more below the average, and if their situation is without prospects. That these cooperatives are concentrated in several areas, mostly on peripheral areas of the country, is another problem. Since in the given regional units agricultural production is generally the most important economic activity, the lagging situation of the farms also has a negative effect on the living standards of the population residing there. A permanent increase in the difference between the capability of certain areas to support farms can lead to an undesirable migration.

We cannot neglect the cooperatives for economic reasons, however. The land they cultivate makes up 29 percent of the producer area (one and one-half million hectares), which we cannot do without. The situation is similar with other factors of production. In principle, only a part of the 40 billion forints' worth of fixed assets could be transferred to other farms. Transfer of manpower and family members--at least over the medium term--would represent additional social costs that would amount to more than the farm support. Weighing all these things, it is desirable for individuals, smaller communities and society alike not to cut back development (or perhaps to eliminate the far farms) but to make operations more profitable.

Thus the continuation of present practice in unchanged form was not possible without endangering the original goals. Modification of special elements of the agricultural regulator system again became necessary.

#### Producer Place Endowments--Management Level

The causes of less profitable or deficit farming are manifold. Among these, we must first stress unfavorable producer site endowments. In Hungary, the value of arable land on 340 cooperative farms does not reach 14 gold crowns, which we regard as the index for a farm with unfavorable producer endowments.<sup>2</sup> It is due to their praiseworthy work that of the 340 unfavorably endowed cooperatives, 61 do not receive support because of their relatively high revenue level. Of the 352 cooperatives which do receive support, 104 were in the "medium" category in 1980, and 69 in the "high" category. The regulator system, which takes endowments into account, and the efforts of the farms themselves made successful farming possible.

---

2. Overlapping or use of concepts causes problems in the numerical evaluation of results. The producer site endowments of a cooperative is unfavorable where the gold crown value of the arable land is below 14. There were 340 such cooperatives in 1980. But of these only 279 received differentiated support. Another 54 cooperatives which receive support have a gold crown value of 14 to 18; 19 cooperatives farm on land that is better than this. We call these 352 farms supported cooperatives because of their unfavorable endowments.



In recent times the view has become more widespread that economic results can be made independent of producer site endowments by dint of good work. Several comments need to be made on this partially true but dangerous simplification.

Above all, undertaking results are directly influenced by differentiated support. A processed data base is not available, and still it can be soundly vouched for that without special support few unfavorably endowed cooperatives can be found in the "high" profitability category.

Moreover, the effect of the producer site endowment does not appear, cannot appear, clearly in the overall-undertaking profitability indexes. The result of the supplementary activity hides the relationship between agricultural production and revenue (good examples are Komárom, Pest, Veszprem and Nograd megye). This is not the problem, of course, for our goal is that cooperatives should manage profitably from their own resources and with the purposeful development of their activity sphere. But we must know that the changing production structure and the profit deriving from it does not alter the basic interrelationships in agricultural production. Table 4 provides a good awareness of the unchanged trend that is being consistently realized.

Table 4. The Relation Between Land Quality and Agricultural Production

Classification	Average gold crown value of arable land				
	0-14	14-18	18-21	21-25	over 25
Income in 1980 per 1 hectare arable land (1,000 forints)					
plant production	5.48	7.22	3.68	10.23	12.60
livestock breeding	6.54	8.02	9.65	9.28	11.79
total agriculture	12.02	15.24	18.33	19.51	24.39
Revenue from agricultural production in percentage of average					
1976	70.4	87.6	100.4	106.6	131.8
1980	67.0	84.9	102.2	108.8	136.0
Balance result per 1 hectare producer area (1,000 forints)*					
1976	1.3	1.7	1.9	2.0	2.6
1980	1.7	2.6	2.9	3.5	3.8
per worker					
1976	12.1	14.1	16.2	18.1	21.6
1980	14.9	20.5	25.3	30.4	31.6
per 100 forints of cost					
1976	9.3	9.8	10.8	11.6	13.0
1980	7.6	9.5	11.4	12.8	12.8

\*It must be stressed that result derives not only from agricultural production but also from management as a whole.

It is evident from the data that income from agricultural production is twice as great on good lands as on unfavorably endowed areas. Also, it is a fact

differentiation in this comparison increased between 1976 and 1980. This is a consequence of the fact that per unit expenditure makes possible an increase in production in proportion with the quality of the land, which in enterprise results--despite the strong effect of other activity--appears more strongly even than before.

To counter unfavorable natural conditions, the farms are developing their auxiliary activities more and more. This is the correct thing to do, in fact it is necessary. But this means that in a number of cooperatives, agricultural production is becoming auxiliary activity. This is not at all a rarity in certain areas. Although it is theoretically possible, we fortunately do not find evidence that the cooperatives neglect agricultural production for their other activities. On the contrary, we find that on certain unfavorably endowed farms they are conducting "prestige" production with great outlays of expenditure. In such cases, the lack of profits or possibly the deficits that are suffered despite the high product averages of agricultural production are made up for with results from other activities. It can be assumed on the basis of analyzing data in various megyes that this effort also contributes to a slow growth of the national income production in agriculture.

One of the characteristic forms of unfavorable endowments is recurrent flood and inland water damage, which has increased in recent years in certain areas of the country for complex (objective and subjective) reasons. A role is played in this by the fact that the flood waters are peaking at increasingly higher levels, but it is also a matter of concern that we have not devoted adequate attention to protection against inland water damage. On the basis of the frequency and extent of the damage, there is a registry of 175 cooperatives which are subject to flood and inland water danger. The unfavorable circumstances make farming more difficult to the extent that 95 cooperatives are under the 6 forint result per 100 forints of cost, that is, they belong to the "low" revenue-level group. Particularly difficult is the situation of 62 cooperatives which because of their unfavorable producer site endowments are also constrained to take support.

The frequent flood and inland waters in these cooperatives cause a great production loss or additional expenditures. But the greatest problem is the uncertain farming management. This could be countered with large stockpiles, but only few farms have the possibilities for forming reserves of such extent. It is a characteristic problem that the areas afflicted by water damages are frequently good-quality producer lands, and thus it is not possible to give up cultivating them despite the great risks involved.

The uncertainty of production and farm management is generally characteristic of the cooperatives that operate under unfavorable natural conditions. Among those that are supported because of unfavorable endowments, 83 farms in 1976 reached the "high" revenue level. Of these, only 25 could maintain their position by 1980, 70 percent fell back. On the other hand, only 36 percent of the cooperatives with better endowments dropped to a lower group. The opposite of this coin is that climbing up is also more difficult. Between 1976 and 1980, 12 percent of the unfavorably endowed cooperatives and 18 percent of the other cooperatives were able to move up to a "higher" revenue level.

Finally, it is necessary to work harder for results under unfavorable endowments! Or to put it another way: under better conditions it is possible to reach the same level more easily. For this reason, among other things, these areas do not attract the specialists and the lack of such personnel is unfavorable to production development possibilities.

In my opinion it can be established without further study of the interrelationships that differences evident in the production level and particularly in profitability still depend primarily on the endowments of the producer area. Regulation must take this into account.

#### The Effect of Supply of Capital Means on Farm Management

The supply of capital means has a strong effect on the production level and on management success. But there is a great deal of uncertainty in the numerical evaluation of the interrelationships. It is a disturbing factor that a shortage of capital means can be both cause and effect. A shortage of capital means impedes production, while at the same time a low level of production and profitability will make an appropriate development of producer means impossible. It is also a problem that the supply of capital means and production can be the function of a third factor (for example, producer site endowment), and thus the interrelationships that can be demonstrated are only apparent. Proceeding with all these things, I would like to discuss several results of the analyses.

The statistical data clearly support the also logically justified statement that a better supply of capital means is accompanied trendwise by a higher production level and greater economic results. But the received numerical values are widely different depending on the kind of indexes we use. It is worthy of note, for example, that gross fixed-asset value per person in an average body of personnel is hardly different in the various groups of cooperatives. In 1980, for example, the per capita distribution in the "low" category was 267,441 forints, in the "medium" category 266,429 forints, and in the high revenue group 290,551 forints' worth of fixed assets. The relative constancy of this index is perceptible by the fact that in a more detailed study which divides the cooperatives into 36 groups, the average for the poorest category of capital means supply was 81.9 percent, and for the strongest group 116.6 percent. Analyses performed through many other approaches give similar results. It appears that the way manpower is equipped in agriculture is rather balanced.

At variance from the foregoing, however, there are great differences (and in the same piece of processing!) in data projected on area. Another study performed with the use of a similar index reflects a characteristic situation.

Grouping the cooperatives according to the net fixed-asset value per hectare producer area (Table 5) we can state the following. With an improvement in the supply of capital means, production value and gross revenue gradually increase. In personal incomes the difference is smaller than this, but in results the difference is much greater. It is noteworthy that with the exception of the highest category there is no great difference in the use of fixed assets, taking production value as the base but in the results the difference is threefold among the two extreme values. Even greater extremes are shown by

Table 5. Group Characteristics of Producer Cooperatives (1980)

Classification	Net fixed-asset value per 1 hectare, 1,000 forints/hectare					
	1-15	15-20	20-25	25-30	30-45	over 45
Number of producer cooperatives including:	311	368	259	159	187	54
ration supported because of unfavorable endowments (percent)	45.3	29.9	20.5	17.0	10.2	3.7
Production value per worker (1,000 forints)	202	239	259	281	311	319
gross revenue (1,000 forints)	49.3	60.8	67.5	70.2	76.4	85.4
personal income (1,000 forints)	40.4	43.5	44.9	46.3	48.8	54.2
results (1,000 forints)	10.5	20.1	25.8	27.3	31.5	34.8
Per 1,000 forints of fixed-asset value						
production value per worker	907	891	875	893	983	1323
results (1,000 forints)	47	75	87	87	99	144
Production value (1,000 forints)						
results (1,000 forints)	1.8	9.8	11.9	11.6	12.4	13.6
Ratio of revenue for auxiliary activity	35.0	32.6	32.9	36.8	44.0	70.8

the results per 100 forints of cost, according to which the index for the strongest group is seven and one-half times that of the weakest.

Thus according to the figures, the greatest difference exists in the success results of farm management. This is understandable because on one hand the strongest farms have the more complex supply of means that increases efficiency, and on the other hand a more ample development source makes it possible to have greater flexibility, and more rapid and purposeful development. But we still have to weigh at least two circumstances in evaluating the figures. One is that with a single exception the ratio of auxiliary activity is greater with a group having more capital means, and in general this increases efficiency. The other is that there is a very close interrelationship between the supply of capital means and the producer site endowments. Almost one-half of the group with small means consists of cooperatives supported because of unfavorable endowments, while in the highest categories their ratio is only 3.7 percent. It can be rightly assumed that land quality has a role particularly in efficiency indexes.

The modernity and composition of the capital means stock can play, in principle, a substantial role in efficiency. It is interesting, however, that the difference is only minimal in its ratio as compared to the gross value of net fixed assets, and thus in certain groups the obsolescence of means is presumably similar. The ratio of machinery and equipment is surprisingly constant. Even in the abovementioned 36-group breakdown the two extreme values are a relatively close 31.8 percent and 40.9 percent. On the other hand, as shown by Table 6, strong differences exist in the use of the capital means stock. On farms with



a "low" revenue level, or which have fallen back in the period of the analysis, the index projected on capital means stock of production value is very small.

Table 6. Production Value Per 1,000 Forints of Gross Fixed-Asset Value

Results per 100 forints cost in 1976	Results per 100 forints cost in 1980					
	below 0 to 0	0-6	6-9	9-12	12-15	15 and above
below 0 to 0	622	837	868	896	921	906
0-6	689	973	963	936	959	990
6-9	788	842	1192	915	894	948
9-12	672	880	1006	900	1032	910
12-15	726	777	971	915	966	910
15 and above	709	701	987	1229	1140	1050

The above table groups the cooperatives according to two criteria, the 1976 or the 1980 results. In a diagonal line from the left upper corner to the right lower corner those farms are situated whose economy of production did not change in the period of the study. In the cooperatives below the diagonal the economy declined, above the line is increased. As a consequence of the dual-row arrangement the difference can be seen in the capital means utilization of the farms that are falling back, that are holding their place and that are increasing their specific results.

The picture, therefore, is varied, and the phenomena shown by the figures are not uniform. We know on the basis of practical experience that on many farms the shortage of capital means causes problems, in fact there are some farms that do not have producer means sufficient for and adequate to the cultivation of the land. But since the difference in the supply of means for manpower is relatively small in respect to the group averages, it is likely that the main cause of the weaker results can be sought for mostly in the general state of development of the farm, and the capital means shortage can be evaluated as a part of this. Of course, it can be assumed that in the "low" revenue-level producer cooperatives the per capita index appears more favorable because the projection basis, the manpower, is not adequate.

#### The Personal Conditions of Production

In response to the idea that had been raised, I also sought to analyze the manpower supply of the cooperatives. On the enterprise level, the review is easy to make, and on the basis of experiences it is well known that a number of farms have a manpower shortage, and in certain areas employment is a concern. Statistically, however, it is difficult to examine what the manpower situation is like for there is no objective comparative base to judge the need. Most of the index numbers which can be taken into account already express directly or indirectly the manpower achievement, and thus they distort. From the available data an index number that affords acceptable orientation is conceivable: the quotient that expresses the relationship of land and manpower. Therefore, in the various analyses I studied the number of those engaged on the producer area in agricultural production. I must note, however, that this comparison leaves

out of consideration the structure of agricultural production, and understandably does not shed light on the manpower relations of the auxiliary activity which forms an important part of farm management. Thus the results are only of an orientation nature.

If we compare the total number of employed with the producer area, the differences are great. This is natural because our large farms do not deal only with agricultural production, but the auxiliary activity does not have a direct tie with the producer land. But if we divide the manpower up and only relate the workers in agricultural production to the area, we unexpectedly receive a rather balanced picture. In the grouping shown in Table 6, the average manpower for 100 hectares of producer area is 5.6 hands at the least and 8.9 hands at the most. Taking into account the 36-part breakdown and the very different circumstances, this is not in my opinion a very big difference. This is also reflected from data ordered according to other cooperative indexes as well. In the study performed on basis of the average gold crown value of the arable area, for example, the extreme values are 5.8 and 7 hands and 6 and 7.5 hands in groupings according to gross revenue per worker.

Weighing the rather firm trend, it is apparent that in most of the large farms it is not the quantitative lack of manpower that explains the lower efficiency. It is true that in proceeding from the weak groups to the strong, manpower supply consistently increases. But the difference is considerably greater in production, and in the weaker cooperatives the manpower situation is even more favorable as compared to the smaller production. It must be emphasized, however, that this statement can be true only in generalities and in respect to averages, and the problems of the individual cooperatives may take form independently of this.

Among the interrelationships we studied, however, the manpower density in one grouping shows a twofold difference (5.3 and 11.9 hands per 100 hectares), but this is according to the specific volume of fixed assets (Table 7). The exception is not accidental for the capital means value projected on the producer area in itself indicates the strength of the farm. The available development and amortization fund in harmony with this emphasizes even better the fact of strength difference. It is characteristic that in this approach the state of equipment for manpower means is also the most balanced. A lower manpower density is accompanied by specifically smaller means while a bigger manpower stock is better provided with producer means. This strengthens the assumption that a low farm management level conceals a general lag. The weak farms are in worse condition in respect to every important factor, while the strong farms achieve their good results with a greater stock of capital means both in the manpower situation and as compared to other manpower.

Our statements thus far have referred to manpower volume and its supply of means. But the success of production depends on the composition of the workers by age, sex, training and so forth, and on the use of the manpower. It was not possible to examine these interrelationships in the system up to now because the data are not processed according to results per 100 forints of cost. Therefore, I have used the sequences of the KSH [Central Statistical Office] according to gold crown value or eigen development means volume.<sup>3</sup> In my

3. Source: "Management of Agricultural Farms, 1980" KSH 1981.

opinion, we can obtain satisfactory information in this way also because, as we saw, the land quality, the available development means are in very close relationship with successful results.

Table 7. Differentiation in Manpower and Capital Means Supply (1980)

Classification	Net fixed-asset value per 1 hectare producer area (1,000 forint/hectare)					
	1-15	15-20	20-25	25-30	30-45	Over 45
Average manpower (hands) per 100 hectares producer area*	5.3	6.4	7.1	7.6	8.8	11.9
Gross fixed-asset value per one worker (1,000 forints)	223	268	296	315	316	241
Development fund per 1 hectare producer area (forint)	459	877	1166	1431	2061	6186
amortization (forint)	1178	1525	1801	1724	2628	5077
Combined:	1637	2402	2967	3155	4680	11263

\*Engaged only in agricultural production

The composition of those engaged in cooperatives varies also according to group averages. Together with land quality, the ratio of active members increases from 67.6 percent to 89.6 percent within the average manpower volume, and in contrast the volume of those steadily employed declined from 20.4 percent to 5.2 percent. Data arranged according to eigen development means shows the same trend. This is understandable, for in the stronger cooperatives the workers cling less to the employee status that affords greater security. Manpower mobility also reflects increasing stability. Proceeding from farms with unfavorable producer site endowments to those with good land, the ratio of those entering and leaving gradually declines by one-half (from 20 to 21 percent to 9 to 11 percent). This same kind of decline can be shown with producer co-operative data grouped on the basis of eigen development means.

The ratio of physical laborers is constant. A comparison of the two types of data processing shows that the ratios fluctuate only between 85.2 and 87.2 percent. Within this, however, the ratio of specialists increases from 24-25 percent to 33-34 percent to the benefit of the stronger farms, and the ratio of women declines from 34-35 percent to 25-26 percent. The latter is a result of the fact that men, who have fewer ties to hold them down, moved from co-operatives with difficult conditions to other places of work.

Weighing all these things we can establish also on the basis of statistical data that manpower is not only less in the weak producer cooperatives, but the composition also is less favorable. It is noteworthy, however, that there is no difference in employment, the number of workdays per worker is practically the same.

In recent years the supply of specialists in agriculture has improved a great deal. But despite development, the situation is contradictory. In 1980, 58.8 percent of those in a managing position had a higher degree, while 10.2 percent did not even have a secondary school degree. It is characteristic that



56 percent of the producer cooperatives employ hardly 30 percent of all specialists, while the 10 percent that are the best supplied employ as many. Area distribution is also highly differentiated. In Pest megye, for example, the ratio is 85 hectares per specialist, in Bacs megye 135 hectares, while in Bekes megye 274 hectares and in Hajdu megye 241 hectares. The spread is even greater in farm data. There are cooperative farms with only one specialist, and on the other hand one cooperative employs 169 specialists.

After all this, it is unexpected that the grouped figures do not reflect this differentiation. According to data arranged on basis of the producer cooperatives' gold crown, the ratio of those with a higher degree in a given group is minimally 54.8 percent and maximally 60.6 percent, while the ratio of those without a degree varies between 8.1 and 11.5 percent. But the ratios do not manifest any firm trend. This is what we can accurately establish if we process the data according to eigen development means. The relationship of specialists and producer land also appears to be accidental. According to the data, the differentiation is not great, and it is in the medium-endowed cooperatives that there is the largest area per specialist.

It is undoubtedly true, therefore, that the differences are great in the professional education of managers. In all certainty, this also contributes to the low level of achievement on many cooperatives. However, it appears to be a tenable judgment that the supply of specialists on unfavorably endowed farms or those that are weak for some other reason is generally poor. In this area, the differences are also great within the various groups of cooperatives.

#### How Long Will We Support Weak Cooperatives?

In judging the possibilities, it is advisable to proceed from the viewpoint that weakness is a complex problem. As is evident from the analysis, the cooperatives which belong in this category work under unfavorable natural conditions, have a poorer supply of capital means, and work with less manpower of less favorable composition. Their location is also disadvantageous mostly from the economic point of view. They are located farther from purchasing or marketing places, transportation is more difficult, and delivery costs are greater. In a significant share of the cases, this is accompanied by less effective leadership--indifferent because of the difficulties--which cannot adequately exploit even existing endowments.

Rarely does it occur that one factor alone causes difficulties on a farm. Where there is no more to worry about than this, the solution is simple because the elimination of the bottleneck improves results by leaps and bounds. The generally low level of the producer forces, however, is characteristic. We may also put it this way--the resources are in harmony with one another at a lower level. This is indicated by the fact that in relation to manpower, which is the most important factor, the various indexes are rather uneven. This unevenness is one of the considerable results of development in recent years. In accordance with the lower level of producer forces, the greatest differences are evident at present in the success results of production, which through the sources of formation determine the differentiated possibilities of development.



As a consequence of the foregoing, no possible solution will result in quick success. If we do not want to worsen an effectiveness that is also otherwise low, we are free to change the various factors of production in harmony with one another. But this of necessity gives room only for gradual development. Since our material means are strongly limited, we can count on slow development of our low revenue cooperatives.

The idea is repeatedly raised that we should improve their economic situation by transforming the production structure of the farms to adjust with their endowments, and in this way state support will become unnecessary over the long term.

Obviously, the production structure influences the results, and optimizing it will ease the worries of the cooperatives. But we cannot put excessive hope in this because the unfavorable endowments have an effect for the most part on all production branches. The difference, aside from rare exceptions, is that one or another plant crop will better tolerate a poor producer site. But in such a case also the outlay-yield ratio remains below the average. Another problem is that a large ratio of the unfavorably endowed producer sites is advantageous for cattle and sheep breeding, but even nationally these do not belong among the branches that assure large revenues. Their larger share in the production structure will from the start determine a specifically lower income level. Thus a change in agricultural production structure will only in exceptional cases make supports unnecessary.

One of the most frequently offered methods for the economic development of unfavorably endowed areas is the expansion of the scope of activity, and the organization of auxiliary (chiefly industrial) activity. This is in fact a useful recommendation as clearly shown by the results in many a megye. But experiences also show that the development of industrial activity in certain areas is limited by objective impediments. The industrial activity of cooperatives has developed chiefly where industry is already developed. The obverse of this relationship is also true. Where there is no industry in the locality or nearby, auxiliary activity develops slowly. This is understandable for a material and intellectual base is also needed for auxiliary operational branches. Indispensable are several specialists at least, a manager, cooperation that can be usefully developed with industrial enterprises, an existing infrastructure, but for the most part the birth of the idea itself is stimulated or inhibited by the state of industrial development.

Therefore, the transformation of the production structure can bring a decisive change in the short run only on few unfavorably endowed farms. Since the producer site still has a basic role in the successful result of agricultural work and in the level of the total remaining factors of production, we will have to continue counting on supports.

By generalizing the problem, we can approach it also from the theoretical aspect. We may put the question this way--if "weakness" is one of the manifestations in the differentiated development of large agricultural farms, then we may answer that we need to count permanently on differentiated treatment (on supports). There will always be weak, average and good farms at the higher level of production. Differentiation of development is the natural condition

of the economy, but we must help those that lag behind if we have a demand for their production, which as we have seen is indispensable. But it is possible to debate the mode and extent of the help. This question can always be decided according to the given circumstances, for the tensions that stem from differing development change from time to time.

### The Purposeful Form of Assistance

In the years following the socialist reorganization of agriculture, lack of organization was the biggest problem as a consequence on one hand of the shortage of capital means and on the other hand of the low level of leadership, which became evident in a wide circle of cooperatives in their weakness, the undeveloped state of management, and in the final analysis in shortage of revenue. Accordingly, in this period we spoke of producer cooperatives that were "economically not strengthened," and the main task was to strengthen their management. Beginning in the second half of the 1960's, the "unfavorably endowed producer cooperatives" received tax rebates and differentiated supports to counter their unfavorable natural conditions. At the beginning, the supplementing of personal income had of necessity a great weight, but beginning in the mid-1970's it became possible to eliminate this form, and emphasis was placed on price supplement supports bound to commodity production.

The effectiveness of this regulation is shown by the fact that the cooperatives, aside from few exceptions, have remained operational amid economic conditions that are becoming more and more stringent. The cooperatives with unfavorable producer place endowments, for which there are special rules, have managed to keep pace with the general development. In fact, in the 1970's the field of play became mixed in respect to success of results. As we have seen, according to results per 100 forints of cost we find unfavorably endowed cooperatives also in the "high" revenue-level category, and some well-situated farms have a low rate of revenue.

We must note here that the revenue level is not to be identified with the management level. The results and the effort expressed to this end coincide only as a trend. Only amid particularly unfavorable production conditions is it possible to have little results despite well-organized work. The view is frequently expressed that the differentiation (differentiation of revenue) shows the achievement of differences among the farms. But this expresses merely a half truth. Results are in part achievement and in part simply a consequence of endowment.

The most important element of the special regulator system continues to be differentiated support for cooperatives classified as unfavorably endowed. The main form is the price supplement as an incentive for commodity production. The main theoretical justification for this is that the additional costs deriving from the cultivation of producer lands of poorer quality must be reimbursed in part or whole if the society has a demand for the products. However, if we accept this, we cannot regard it as just to deny farms a price supplement above a certain revenue level. Some cooperatives rightfully state that the revenue level rose as a result of their efforts, their work, and by this means--as the regulator system was modified--escaped from the dependent

category although the endowments remain unfavorable. In my opinion this practice is also debatable and can be justified at the best with the narrowness of state capital means. It should be emphasized that the former revenue-supplement support has been terminated. The price supplement, in respect to economic content, is reimbursement of additional costs for production, and not support for work.

Over the long run we must strive to see that the farms receive supports that are regarded as necessary and are of a cost-reimbursement nature independent of the revenue level because otherwise in the interest of the success results they will rightly end, or at least retrodevelop, their agricultural production and convert to other, more profitable activity. The extent of the price supplements must be established, of course, in accordance with the interests of the economy and in harmony with needs and efficiency requirements. It should be noted that with the most recent measures this effort can already be felt. For the marketing of certain products and farming on arable land under 17 gold crowns in value, price supplements may be granted independently of their revenue situation.

Price supplements have two forms: the basic price supplement depends on where the price center of agricultural products is located. If we assume that agricultural producer prices cover the cultivation costs on the poorest quality of land kept under cultivation, then there is no need for price supplements. But the farther removed the products are from the price center the greater the demand for support.

The state links special price supplements to a number of products. The goal is that large farms are necessary for the economy and at the same time should be interested in the production of commodities appropriate to their endowments. This is actually intervention in the life of the farms by indirect means, and therefore certain people dispute its justification. I do not regard such "intervention" as erroneous, for the harmonization of social and group interests is indispensable. The problem is, on the other hand, that this support breaks up the unity of the price system. Actually, it can also be regarded as an area price, which in principle does not have such a place in a small country like ours. It is also frequently raised that price supplements frustrate our efforts at increasing efficiency. There is reason also to weigh other interrelationships.

Some of our agricultural producer prices, particularly in crop production, are lower than the world market price. For example, in the export of grains a higher price can be realized than what the producers receive. The profit margin provides cover for the so-called special price supplement and beyond that for profit, and thus it is justified to give incentive to the production of this important product group. In this case, the price supplement is not contradictory to efficiency requirements, and in fact is in harmony with them.

The question may be raised: if this is so, why do we not raise the producer price? In principle, this is the correct solution, and the practice gradually brings it closer to the world market price. But there are obstacles to its rapid realization. Among these we must first mention that a rise in the grain



price would increase the fodder costs of livestock breeding, which it can endure only if applied gradually in proportion to improvement in fodder utilization. A simultaneous increase in the producer price of livestock appears to be a possible road, but this would require consumer price increase and would worsen the competitiveness of livestock breeding. It is also a problem that the outlay-yield relation depends in crop production on producer site endowments. If we desire to give the necessary revenue in price to farms on unfavorable areas, a discriminatory allowance is created for farms operating on better producer land. On one hand it is difficult to withdraw this in a just way, and on the other hand it is easily obtainable revenue which does not give incentive to the well-endowed farms to reduce specific costs.

Weighing all this, we cannot regard the support system as slippage, as a deviation from correct regulation. In fact, this solution proceeds from the outlook that enterprise decisions must be turned by indirect means into a direction appropriate to the interests of the economy.

The advantage of price supplements is that it gives incentive to commodity production and to raising the production level, and the support can be obtained only after actual work. Its disadvantage, on the other hand, is that it can be realized only afterwards, and thus there is a delay in helping the developing of production, and in easing the shortage of sources. For this very reason, cooperatives indicated for support can receive development contributions on the basis of a one-time judgment. One part of the development contribution is generally oriented, and the other part serves on the other hand the development of auxiliary activity and the establishment of new work places. This type of support can be repaid from the production tax realized during the activity. Since experience has met our expectations, no significant changes in development-goal supports has been necessary.

#### Further Possibilities of Development

The differentiation of the cooperatives, including an important group of weaknesses, is therefore a complex problem, and a quick change in this area cannot be expected. But one cannot draw the conclusion that the future can bring only little development either from the viewpoint of the cooperatives which are in a difficult situation or from the viewpoint of the economy. But we must adjust consciously to realities. If we reckon with facts, we can expect the smallest economic burden.

According to our experiences, the best solution is to follow the path we have been on up to now and keep the differentiation within limits. We must continue to allow room for the realization of achievement differentiations, but we must prevent tensions that endanger our goals and are related to regulation. The fulfillment of tasks facing agriculture demand from all groups of large farms greater achievements. In accordance with the resolution of the 12th Party Congress our goal is: "The vanguard state farms and the producer cooperatives should develop dynamically, be an example in the application of modern production and management methods; and promote the generalization of these methods. Among the medium managing, well-endowed cooperatives more and more should reach the level of vanguard farms. We need to help farms that are operating under unfavorable natural conditions to better develop a production structure more suited to their endowments."



A recurrent problem of management is that an increase in efficiency would justify a stronger concentration into good farms. As we have seen, however, there is no real possibility for this. The orders that were put into effect in 1982--according to needs--resulted in the revenue regrouping of several hundred million forints in agriculture to the benefit of large farms with unfavorable endowments. This step was inevitable. The concern, however, is understandable as to how far we can go, how many sources we can withdraw from the stronger farms before our development comes to a standstill. We have succeeded in avoiding the critical limit thus far, and on the basis of estimates this can be expected now as well.

The modifications are advantageous to the unfavorably endowed farms. And still we must stress that the goal of regulation is not equality. It is a decisive problem that the good farms should continue to be interested in production growth. For this reason also, earnings regulation has been modified. According to the new arrangement, every farm may increase wages tax-free by 2.5 percent. This standardization is disadvantageous, to be sure, to the low revenue-level farms which up to now enjoyed a greater subsidy; at the same time it improved the incentive of the stronger large farms, and gave greater room to the paying of wages according to achievements. The disadvantages of earnings regulation tied to the average are also moderated by the fact that those farms which remain within the wage-fund of the previous year receive the possibility of being granted a maximum 3 percent, tax-free increase.

One may see in advance that the regrouped revenue is not adequate to solve tensions, but further tension is dangerous because of multiplying risks. Therefore, we must also look for other possibilities. The economic development of agricultural production is a basic task. Because of this, we must above all improve production conditions.

The elimination of flood and inland water damages could finally settle the problems of several farms and substantially improve the situation of others. But for this, a great deal of work, money, and a change of outlook is necessary. Available central sources give only narrow possibility for moderating the problems. Later, depending on our possibilities, we shall have to increase the sums we can devote to this purpose, but even until then we must improve the purposefulness of the use. The so-called complex melioration works should be concentrated chiefly on endangered, well-endowed areas. Moreover, the melioration work must be continued also on other unfavorably endowed areas. In order to attract eigen sources more intensively, state support that can be extended for melioration work has been differentiated between 30 and 70 percent. For those farms that do not have sufficient strength, it is possible to give a source supplement that is interest-free and must be paid back. Preferred credits can also be used for melioration work. On the national scale, it is at least of this great importance to moderate or prevent water damages in developing the fields of our farms, in choosing the production branches, and in working out cultivation procedures.

Because of a deficient and technically poor stock of capital means, it is a problem in certain areas to cultivate the producer lands in time and good quality. The limited narrow demands make it impossible in many instances to improve the situation. The problem can be eased, however, by broadening the

machinery loans. It is also likely that working capital on these farms is insufficient, and this makes it difficult to utilize fixed assets. This may be the most important cause and explanation, for example, for the often unrealistically lower fertilizer utilization. As we have seen, the unfavorably endowed farms have received development support on the basis of one-time awards. It would be correct if unrestrictedly available funds were used primarily for supplementing the stock of capital means and for eliminating bottlenecks. And it would also be desirable if unlike practice at present, support could be given for the acquisition of working capital.

The farms themselves can improve their situation if they modify their production structure according to their endowments. It is also worthwhile for them to calculate the kind of products, appropriate to the producer area, for which they will receive price supplements. The extension of this support form to cooperatives with arable land that have an average 14 to 17 gold crown value could moderate the problems of many low revenue-level farms.

Pressing forward more strongly with the expansion and modernization of various supplementary (industrial, service-type) activities would be justified. It is true that for the most part there is no manpower surplus on the large agricultural farms. But manpower that is released by increased productivity and perhaps by the simplification of the production structure could be well used in auxiliary activity.

According to practice thus far, the industrial enterprises give advantages to the large agricultural farms in their environment, and thus the rapid development of auxiliary activity in areas that are in need cannot be expected without help. Those cooperatives, however, which conduct developed industrial activity can also help other farms by turning over some of their own auxiliary operational branches, or as a mediator in bringing together needs and capacities. This idea was born in the practice of recent years. A good number of examples show that such operation offers great possibilities for strong and weak farms alike.

Cooperation among the farms and the accompanying voluntary regrouping of producer forces can be used, of course, not only in auxiliary activity. Some of our best cooperatives are seeking relations with farms managing on a lower level. We can assume a role is played in this by a feeling of responsibility for the whole movement, but it is a fact that the new capacities rest on mutual material interests. Our cooperatives increasingly recognize that there are many unused possibilities in economic cooperation. Frequently, this is how manpower and means can be brought into harmony. It is not rare that means invested in a farm struggling with a shortage of sources will bring more profit than if it were used on a strong cooperative's own farm. There have also been cases where the specialists have been transferred from good farms to cooperatives, and they had a positive effect on the entire farm management.

We are only at the very beginning of exploiting the advantages latent in economic cooperation based on mutual interests. If we use these possibilities well, tension within agriculture can be substantially moderated, the use of producer forces may improve, and the danger of stagnation on good farms will be reduced. In making economic decisions, we must weigh more carefully than

up to now this alternative which does not require additional sources, and even uses existing producer sources more purposefully. The new regulation seeks to give incentive to such relations by taking the economic cooperation conducted on the cooperative site according to the conditions of a low revenue cooperative.

Thus there are real possibilities for raising the level of farm management. But to discover these possibilities and to intensify the results it is necessary, above all, to have high-level leadership and organizational work. The increasing of intellectual sources is a factor which in itself may improve the use of the entire producer capacity.

Improvement of the specialist supply is an unpostponable task on some of the low revenue farms. In this, the managing or the interest representational organs and cooperatives have an important role. Modernized support conditions help better than before the improvement of the specialist supply, and the limits on those available have also been improved. According to experiences the placement of one or two specialists does not bring important results, and therefore in awarding the support megye councils give preference to group settling. It is also significant that the statutory provision makes possible increased material recognition for successful work. The advantages that can be gained hopefully will quicken the undertaking desire of specialists.

All this, however, is only a possibility. The results can be expected when managers who have proved unsuitable are exchanged as soon as possible, and if the poorly supplied farms recognize the advantages that can be expected from good leadership. It is to this end that we must give more help in management to the interest representational organs and to the workers in the party organizations. It is also important that the strong farms should understand the problems and support their dispensable people in undertaking the difficult task.

The path as outlined, of course, with the means available will not eliminate the differentiation in production and revenues. This cannot even be our goal. But with good work we can increase the efficiency of production even on the low revenue-level farms, and thus we can moderate tensions, and despite the more difficult economic conditions we can continue the upswing in the development of agriculture.

6691

CSO: 2500/214

## FIRST QUARTER PRODUCTION STATISTICS PUBLISHED

Warsaw ZYCIE GOSPODARCZE in Polish No 14, 25 Apr 82 pp 1, 4

[Article by Ch. H.]

[Text] We have been waiting with great interest for the statistical summary of the results of first quarter operation of the economy. In that same period we began to implement the program of economic reform. In essence, the work of our enterprises has not been disrupted by the strikes. We began to implement the government-established operational programs. All of these factors ought to facilitate stabilization of the operation of the economy, normalization of co-production links and gradual changes of production structure.

On the other hand, however, the factors, which hindered overcoming the economic crisis, appeared with a greater force than before. The most outstanding of these factors were: additional import restrictions of the capitalist countries; running out of stocks of imported raw and other materials for production; "ongoing" changes in organization and methods of industrial management. Evaluation of all these positive as well as negative factors is very difficult on the basis of the available data. This was so because of the still very complicated situation and the fluctuating effect of individual causes impeding resolution of the crisis.

During the first quarter industrial and construction production was still declining. Industrial sold-production was 11 percent lower in comparison to that of the first quarter of last year (during the comparable time of work by 10 percent). However, the rate of this decline had a clearly diminishing tendency. As compared with the respective months of 1981 this rate of decline was: for January--13.7 percent; for February--10.7 percent; for March--7.4 percent.

In March, as compared to February of last year, the increase of production was 15.5 percent (during the comparable time of work, by 1.7 percent), while the decrease in employment was 6,400 persons.

How the aforementioned trend will continue is at the moment difficult to estimate. However, changes in the structure of industrial production are no less important than the actual level of that production. It is, above all, the changes that indicate whether and to what degree the industry is able to adjust to the altered conditions, both external and internal. The most noticeable tendency in this area is the increase in production of the mineral-extraction industry, and the tolerable results achieved by the small-scale



industry. Hard coal output increased by 16.5 percent in March, and by 13.8 percent during the whole of the first quarter; electrolytic copper production increased by 4.4 percent (during the first quarter it declined by 5 percent); lead production increased by 5.6 percent (first quarter was marked by a 2.2 percent decrease). As compared to the fourth quarter of the previous year, an increase in production was seen for hard coal, brown coal, natural gas, lead, zinc and cement.

In March electricity production more or less was on the level of the previous year. Considering that the evening peak demand decreased for this period by nearly 1,000 MW, such level assured coverage of the needs of the economy. Power supply levels 20 and 19 had not been announced even once during the month of March.

This March, as compared to March of last year, there was a 7 percent increase in small-scale industrial production. During the whole first quarter there was a 1.1 percent increase. (Small-scale industry provides about 5.3 percent of the total socialized industrial production.)

In viewing the subsector structure for the first quarter of 1982 by comparison with the same period of the previous year, the increase of production occurred in the following industries, along with the increase in small-scale industry:

coal industry	-- up by 13.8 percent;
energy industry	-- up by 3.7 percent;
whiteware	-- up by 1.9 percent;
clothing	-- up by 1.6 percent;

However, a higher than average decrease (11 percent) was noted in the following more important subsectors:

iron and steel industry	--down by 17.9 percent;
metal industry	--down by 14.7 percent;
transport equipment industry	--down by 16.4 percent;
electrotechnical and electronic industry	--down by 16.7 percent;
chemical industry	--down by 16.3 percent;
wood industry	--down by 13.2 percent;
textile industry	--down by 16.8 percent;
food industry	--down by 12.5 percent.

In some cases (for instance, in metallurgy) the decrease was close to planned estimates for the first quarter; however, this could not be said for all the subsectors.

During the first quarter, specifically in March, planned restrictions, or production stoppages were initiated in individual plants. Temporary restrictions affected 325 enterprises. Relatively permanent restrictions (lasting at least until the end of the year) included 44 enterprises. As a result of these restrictions the decrease in employment was about 4,500 persons.

Total industrial employment during the first quarter decreased by 4.9 percent, with an increase in the personnel wage fund of 20 percent, and 26.2 percent, in average wages.

The winter losses in agriculture included about 26 percent of the winter rape area, about 11 percent, in barley, and 3 percent, in rye and wheat. The livestock raising situation is very complicated. This is due to the increase in the free-market prices of grain and potatoes, and to the decrease in the price of piglets. The supply of gilts increased to the procurement centers. These are signals indicating the collapse of the movement to increase hog-breeding. The decisive influence in that collapse is debatable: the physical lack of fodder; or the disadvantageous ratios of the price of fodder to the procurement price. At this moment these ratios are the worst in nearly 10 years.

Butcher livestock procurement was 151,300 tons in terms of meat in March of this year; as compared to March of last year, this procurement was about 14 percent lower, and as compared to February of this year, it was 21.5 percent lower. The decrease in hog-procurement occurred along with an increase in cattle-procurement.

In the first quarter of this year livestock procurement was 10 percent lower as compared to that in the comparable period of the previous year. Lower procurement of livestock is the result of lower procurement of slaughter poultry by about 81 percent in March of the current year, caused by the loss of production from a considerable number of poultry farms that is due to the lack of imported feed mixes.

Milk procurement in March of this year was more than 588 million liters and was 1 percent higher in comparison with March of last year, and 13.2 percent higher in comparison with February of this year. During the first quarter of this year, milk procurement was about 1,687,000 liters, that is, it was 2.4 percent higher than in the first quarter of last year.

The scale of concentrated fodder was 2.23 million tons for the period July 1981-March 1982. It was 28.6 percent lower in comparison with the same period of the previous marketing year.

The sale of artificial fertilizers for cooperative and private farms was, for the period July 1981 to March of this year, 1,982,000 tons in pure form, and was 1.8 percent higher in comparison with the same period of the previous marketing year.

The level of shortages continued in the supply of basic spare parts of agricultural machinery and equipment.

In the socialized housing construction industry 20,400 apartments have been completed for use; of these 11,600 were handed over in March of this year. Compared to the first quarter of 1981, there were 13,200 apartments released for use, that is, 39.2 percent less. Investment outlays in the government economy amounted to 30 billion zlotys in current prices for the period January-February. In that time, 210 new investment projects were initiated for a total cost-estimate value of 3.6 billion zlotys.

In the first quarter of this year 10 outpatient clinics have been put into use, also 4 health centers, 6 preschool nurseries with a capacity of 450 places and 16 preschools with capacity of 2,250 places.

Average employment in the four basic sectors (industry, construction, transportation and communications, and commerce which include about 70 percent of the employees in the socialized sector of the economy) was 361,000 lower for the first quarter of this year, that is, it was 4.4 percent lower than the level of first-quarter employment in 1981. As compared to the fourth quarter of last year, average employment in the four sectors was less by 303,000 persons, including industrial employees, by 203,000 persons. A great majority of those employed opted for early retirement.

Payments from the personnel wage-fund (without compensatory pay) increased by 25 billion zlotys in the four basic sectors, that is, by 15.1 percent as compared to the first quarter of last year.

Compensation paid to those employed in these sectors amounted to about 24 billion zlotys. This compensation was paid because of the price increase of bread and other grain-flour products and the introduction of new retail prices for basic food items, heating fuel and energy. Additionally, the family members of the employees were paid about 14 billion zlotys from the Social Insurance Agency's funds.

Payments from the awards fund of the plants in the four basic sectors totaled 48 billion zlotys for the first quarter of this year, that is, they were 14 billion zlotys more than for the same period in 1981.

Personal monetary income increased by 111.5 billion zlotys in March of this year, that is, by 64 percent in comparison with March of last year. The components of this income increase were, among others: the increase in the wage fund (including compensatory pay) by 49 billion zlotys, that is, by 43 percent; the increase in social services (including compensatory pay) by 29.1 billion zlotys, that is, by 138 percent; and the increase of income from the sales of agricultural products by 27.1 billion zlotys, that is, by 156.9 percent. In March of this year personal monetary expenditures increased by 107.6 billion zlotys, that is, by 74.6 percent as compared to March of last year. Expenditures for the purchase of goods increased, entirely because of the price increase, by 98.5 billion zlotys, that is, by 86.5 percent.

In the first quarter of this year, in comparison to the same period last year, personal monetary income increased by 264 billion zlotys, that is, by 55.7 percent. Monetary expenditures however, increased by 185.2 billion zlotys, that is, by 46.8 percent. The amount of personal funds totaled 1,206.1 billion zlotys at the end of March, of which the monetary deposits amounted to 754.1 billion zlotys, and the amount of cash, 452 billion zlotys.

Retail sales of goods by individual outlets of the socialized sector of the economy were 71.4 percent higher (in current prices) than those of March last year. The sale value of food products (including alcoholic beverages) was more than twice as high, and the sale value of nonfood products was 47 percent higher. It is estimated that the actual quantities of goods sold were lower than in March last year.

Significant shortages persisted in the area of nonfood products. Among others, such shortages existed for products of light industry and for durable mechanical equipment.

In the first quarter of this year retail sales increased by 46.9 percent as compared to the first quarter of last year; at the same time, the sale of food products (including alcoholic beverages) increased by a higher amount (by 67.8 percent) than the sales of nonfood goods (by 31.2 percent).

Two phenomena have to be stressed when considering the market situation. For the first time in many years, March was the month in which the rate of increase of personal expenditures was higher than the rate of increase of income. These are the first results of price changes.

Unfortunately, the second phenomenon is not new. It is based on the fact that the burden of maintaining the existing market level, or, speaking more precisely, prevention of a total market collapse, is supported to a greater extent by the food economy rather than by other industrial sectors.

In March of this year, as compared to the March of last year, we have observed a considerable increase in exports. In trading with I payments area, exports increased by over 20 percent, and with II payments area, by 11 percent, while imports from I payments area were higher by 6.3 percent and were lower by about 43 percent from II payments area.

In the first quarter of this year, as compared to the first quarter of last year, exports approximated the level of last year (lower by 0.8 percent), while imports were lower by 25.2 percent. In exports, there was a large increase in regard to fuel and energy (mainly coal and coke) and construction projects, while a considerable decrease occurred in the area of food-industry products, wood and paper products and agricultural products.

Attention should also be drawn to the principal changes in the import structure. The share of imports for investment purposes decreased as a whole from 11.9 percent in the first quarter of last year to 6.6 percent in the current year, while, at the same time, there was an increase in the share of supply-type imports.

It is difficult to draw any further general conclusions from the above given data. In regard to the material welfare of the population, the trends caused by the introduction of economic reform, and primarily price changes, are quite clear. They are, however, considerably less clear in regard to the scale and structure of production. Even though no precise data are yet available concerning living costs increase (Central Office of Statistics (GUS) is obliged to prepare such data at 6-month intervals); nevertheless, certain preliminary estimates may be made, with the stipulation that such estimates will be tentative in nature. Thus, the cost of living increase in January, as compared with that of January last year, was about 50 percent; while in February, as compared with the same month in 1981, it was about 115 percent. The average wage increase, including compensation, was in February, smaller at least by one-half.

This difference (although no direct comparisons should be drawn in this case) reflects the scale of the social costs of resolving the crisis. The matter of greatest importance is to have these costs halt the decrease in production and the changes in the structure of production and improve its effectiveness. Some harbingers ["swallows"] of such changes may be observed; however whether they really predict "spring" will be seen in 2-3 months.



## INITIAL ASSESSMENT OF ECONOMIC REFORM REPORTED

Lodz GLOS ROBOTNICZY in Polish 2-4 Apr 82 pp 1, 3

[Article by Janusz Kotarski]

[Text] From the standpoint of long-range economic policy, the first quarter is primarily the beginning of the implementation of economic reform. It is difficult to attempt to make a more thorough analysis after such a short time. Ninety days is only sufficient to make some preliminary observations, which does not mean that the most valuable may turn out to be the critical signals.

The registration of these signals and the suggestions that ensue from them must, however, take into account the fact that reform is being applied under extremely difficult conditions, that were additionally aggravated by the economic sanctions applied by the United States and certain Western countries during the first quarter. Thus, both the structural preconditions of our economy (for example, the dependence, of about 60 percent of industry on imports) and the need to make payments on loans and interest under penalty of breaking off talks on the subject of further rescheduling of the debt, and finally, implementation of the primary goal--counteraction to the negative effects of the winter period, required many operative decisions that were sometimes not too consistent with the principles of reform.

This preliminary assessment must also consider the situation of the enterprises themselves, faced with self-government, self-dependence and self-financing, but at the same time lacking raw and other materials etc. The first quarter was, after all, a period of total reshaping of coproduction ties, whose determinant most often was lack of a guarantee on the part of the partner.

However, none of this changes the fact that certain tendencies in the approach to economic mechanisms introduced by reform must arouse fear. The circumstances mentioned above served, in far too many cases, as a kind of screen behind which enterprises tried to utilize the principles of reform to implement parochial interests. Too often they tried to relieve themselves of the effort that improvement in work organization, employment efficiency, and cost reduction, requires.

This can be observed in the specific planning methodology. In many cases, the question was asked of oneself at the beginning--what level of profit must be achieved to

maintain both a state of employment and obtain an increase in wages without reducing other costs. This led by a straight path to raising the prices, particularly of these goods which are not covered by a system of controlled or official prices.

This is not a trivial problem from the social point of view either. It is estimated that approximately half of the products still carry free prices and a further increase in the tendency to work out a correspondingly high profit (making it possible to pay for both a progressive turnover tax and accumulate higher wage funds without reducing employment) will contribute to an acceleration of inflation.

Such a development of events may also make it necessary to modify the system of compensating for price increases both in budgetary units as well as in regards to people covered by social security, leading, as a result, to a flattening out of incomes, with no relationship to management efficiency.

The problem is not trivial in face of the fact that in applying reform the increase in prices for market items was estimated at approximately 60 percent, whereas in practice, this indicator is much higher.

The difficult supply situation had an adverse effect on the principles of competitiveness, which had been written into the reform. Nor is it not unimportant that many enterprises still maintain a position of monopoly.

In fact, the competitive race applied primarily to the operational programs. This was clearly revealed at the commodity markets in Poznan, organized for the first time under conditions of reform. Aside from the bid resulting from "registering" in the operational program, the key industry did not propose many commodities. Crafts and the small-scale industry started out somewhat better, which may confirm the thesis that in order to achieve the goals of reform, time is also necessary.

Of the other signals, the fact is worth noting that the income tax, unfortunately, continues to be a price-fixing element (added automatically to costs). Possible higher returns into the state budget from the income tax than from the turnover tax would indicate that it has not been possible to put into effect the very important principle of "large turnover, small profit".

The matter of foreign-currency conversion factors, it appears, also requires more precise analysis. The difference in the conversion factor for won raw materials (1 dollar = 50 zlotys) and in export (1 dollar = 80 zlotys) unfortunately encourages the export of the least processed goods. On the other hand, however, the possible revision upwards of producer prices may, under present technical conditions and current efficiency, make export unprofitable.

Application of economic reform is a long-range process. A fetish should not be made of the negatives that have appeared, nor should they be ignored. Beginning in April, a system of analyses and evaluations of the application of reform, organized in accordance with the government's schedule of work, will function. A draft of its general assumptions was discussed at the last meeting of the Commission on Economic Reform. This will be a scientific system of accumulating information and analyses, qualified to answer the questions: Are new management principles being put into effect and do the executive regulations correspond to the intentions of reform.

## CHANGES IN 1982 SOCIOECONOMIC PLAN REPORTED

Warsaw IDEOLOGIA i POLITYKA in Polish No 4, April 82 pp 95-103

[Excerpts from article by Jan Guz]

[Excerpts] The changes in the national economy made in 1981 did not bypass methods of regulating its functioning, especially in planning. Work done on the directions of economic reform has been of special importance in this regard. These efforts have created premises for substantial modifications in activities connected with preparing the plan for 1982. It was symbolized through the change made in the name of the yearly plan. The adjective "national" was changed to "central," and so in 1982 we have the Central Socioeconomic Plan [CPSG] instead of the National Socioeconomic Plan [NPSG] of former years.

Underlying the symbolism of the changed name of the plan are substantial changes in its content. First, the scope of the central plan and its minuteness of detail have been reduced. The 1982 plan is composed of the Council of Ministers resolution and a schedule; 2 years ago, in 1980, there were 17 schedules. Second, the application of plan directives has been radically curtailed, and the directive and forecast-information section has been separated. Third, the organizational-unit [plant and equipment] role of the economic ministries has been abandoned. This is designed to limit their role to exerting indirect influence on enterprises, ensuring the latter independence in the development of their own plans.

## The Planning of Developmental Activity

It is in the nature of developmental processes to be spread over many years. For this reason, the planning of these processes should not be decided when the yearly plan is prepared, and certainly not when the quarterly plan is set up. However, for 2 years we have had an exceptional situation in this area due to the lack of a current five-year plan. The 3-year stabilization plan prepared last year was developed for another purpose, and was not able to fill this gap. In addition, work continues to clear the plan and to adapt it to the new circumstances of the national economy.

The duty of outlining developmental policy in 1982 of necessity must fall upon the CPSG. The first central quarterly plan did not undertake this

matter. Thus, we may assume that the provisions of the yearly plan adopted in December 1981 remain current in this regard. At the threshold of 1982, the cost-estimate value of the entire investments program in the socialized economy (from the initial stage of implementation through the total, comprehensive completion of investments) amounted to approximately 3 trillion zlotys. Already incurred outlays amount to approximately 1.8 trillion zlotys, of which approximately 50 percent have thus far been put into operation. The remainder, or approximately 1.2 trillion zlotys, represents a so-called investment commitment, i.e., the amount of outlays indispensable to complete all projects included in the investments program. This is the equivalent of investing at the 1981 level over a 4 to 5 year period, and considerably more in industry. Investment outlays in the socialized economy for this year are planned at 340 billion to 350 billion zlotys. Thus, the potential for financing the implementation of investments has dropped by about 15 percent.

The Special Investment Commission under the chairmanship of Deputy Premier Z. Madej reviewed the investment projects already underway. The result of the commission's work was the curtailment of the continued implementation of investment projects of a cost-estimate value of 200 billion to 250 billion zlotys. Together with investments curtailed earlier, this amounts to a cost-estimate value of 600 billion to 650 billion zlotys. Dropping the implementation of such a considerable number of investments has made possible the improved execution of other projects. Nonetheless, in the opinion of some experts, the scale of reduction is not sufficient to set the investments front completely in order. Because of the planned reduction in the level of investment outlays, particularly in industry, there may be the continued occurrence of such unfavorable phenomena as the dissipation of means, the diffusion of potential and, consequently, insufficient progress on the structures of concrete projects. The signs issuing from major investment structures seem to confirm these fears.

In the plan for 1982, new principles for the distribution of investment funds were adopted. Their distribution to the ministries was abandoned. The concept of central investments and the investments of economic organizations was introduced. The first group includes 78 investments named in the CPSG; credit allotments have been specified for each one. The remaining investments are included in the second group. These will be financed out of enterprise funds or on credit granted by the NBP [Polish National Bank] competitively. In this way, the bank will assume a major part of the responsibility for conducting investment policy. The success of this move would create an incentive for the still greater commitment of financial institutions in investment activity programs.

It is expected that in the near future, the government, via the Planning Commission, will make decisions only on the undertaking of central investments that represent approximately 20 percent to 30 percent of the general value of investment outlays. Regarding the designation of remaining outlays, in accordance with governmental guidelines, and abiding by rules of cost effectiveness, the Investment Bank will make the decisions.

8536

CSO: 2600/559



## RATE OF UNUSED PRODUCTION CAPACITY REPORTED

Warsaw WIADOMOSCI STATYSTYCZNE in Polish No 3, Mar 82 pp 12-13

[Article by Bogdan Wyznikiewicz and Docent Dr Habilitatus Leszek Zienkowski, GUS [Central Office of Statistics] Department of Balance-Sheets of the National Economy]

[Text] A GUS report on the socioeconomic situation in 1981 contained the following statement: "As a result of the substantial increase in fixed assets in the past few years, there has arisen a considerable potential in production capabilities that is not being fully utilized, mainly in the processing industry (except for the power industry) and in construction." Thus, it seems advisable to make a brief presentation of simplified methods for estimating unused production capacities.

The evaluation of the degree of utilization of production capabilities is a very complex task; moreover, the results yielded will always be controversial. Let us begin by saying that views may vary regarding the methods used to measure production capacities. If we define them in physical units, the problem of nontotalization arises. Defining them in value units likewise may engender doubts. The value of production is contingent upon its structure; consequently, we should perhaps adopt here some sort of conventional assumptions of an arbitrary nature. These and many other problems not mentioned here remain to be solved in Polish statistical practice. Until this happens, it is advisable to make an estimate on the basis of several simple assumptions.

In the first place we assume that under present economic conditions the work force is not a factor affecting the utilization of production capacities in a fundamental way. In conjunction with this, for selected basic subsectors of the processing industry a simple linear regression has been used to estimate a trend of changes in the productivity of fixed assets measured by the ratio of net production to fixed assets, expressed in constant prices. It is recognized that the period during which these ratios developed relatively "normally" was from 1965 through 1977. During the period encompassed by these years, a slightly shorter subperiod was chosen for each subsector, during which the empirical data best corresponded to the workings of the trend. We noted the basic statistical trend in 8 of the 13 subsectors examined. In most cases it was a favorable trend, i.e., it showed a

tendency toward the increased effectiveness of fixed assets. Based on comparisons of the trend, hypothetical values of the effectiveness of fixed assets in 1980 were calculated for these eight subsectors. As an approximate measure of unused production capacities, we recognized the share (in percentages) of unused production capabilities in hypothetical capacities (attained as the difference between the extrapolated, i.e., hypothetical and the actual productivity of fixed assets).

For those industrial subsectors for which we had not ascertained statistically the basic trend of productivity changes for fixed assets, we based our estimates on the volume of the average productivity of fixed assets, eliminating from the period 1965 through 1977 those years at either extreme that showed a more pronounced divergence from the average. Hence, we adopted the assumption that the productivity of fixed assets in these subsectors was maintained at a constant level during the period under examination. The low coefficients of variability inherent in the interval of 2 to 5 percent confirm the aptness of this assumption. The calculations of the percentages of unused production capacities and the interpretation of these percentages are, of course, the same as described above.

It is assumed that a further extrapolation, up to 1981, would lead to results of little credibility, since a continued significant increase in the productivity of fixed assets could not take place in practice. Taking into consideration the imprecise nature of the entire estimate, we believe that the volumes of unused production capacities described in the table are only an approximate characterization of the range of volume exhibited by unused production capacities in 1980 and that they showed some increase in 1981. Moreover, we modified the formal results in the evaluation by dropping off marginally high volumes and using a steeper incline. According to this version it is estimated that if the "normal" usage of production capacities were possible in the processing industry, net production could increase by more than 40 percent over actual output, and it could average from 25 percent to 60 percent higher in particular subsectors. In our opinion, this estimate should be treated as a minimal variant. Let us add that the nonuse of production capacities we have evaluated should be interpreted not so much as the nonuse of the production capabilities theoretically available as the nonuse of production capabilities that could have been used, given the technological and organization circumstances from 1965 through 1977.

In conclusion, it is our opinion that the problem of researching and gauging the level of utilization of production capabilities, an especially important problem during the present crisis, requires further in-depth study.

Estimates of Unused Production Capabilities in Selected Subsectors in the Processing Industry in 1980

A. Estimates Based on the Productivity Trend of Fixed Assets

<u>Subsector</u>	<u>Subperiod used as basis of estimate</u>	<u>Specificity coefficient of the comparison of the trend <math>R^2</math></u>	<u>Direction of the trend</u>	<u>Unused production capacities in 1980 in percentages</u>
Industry:				
fuel	1966-1975	0.88	positive	45
metals	1969-1977	0.66	negative	18
machine	1965-1976	0.70	positive	18
precision tools	1967-1976	0.92	positive	24
means of transport	1967-1976	0.75	positive	31
electrotechnical and electronic	1965-1976	0.90	positive	26
chemical	1965-1975	0.91	positive	28
food	1965-1975	0.98	negative	28

B. Estimates Based on Mean Productivity of Fixed Assets

<u>Subsector</u>	<u>Subperiod used as basis of estimate</u>	<u>Variability coefficient (ratio of standard deviation from the mean)</u>	<u>Unused production capacities in 1980 in percentages</u>
Industry:			
iron metallurgy	1966-1975	0.05	44
nonferrous metals	1968-1975	0.04	34
construction materials	1965-1975	0.02	40
timber	1965-1975	0.02	33
textile	1966-1975	0.03	26

8536

CSO: 2600/524

## ECONOMIC CONTRADICTIONS IN PRODUCTION INDICATED

Warsaw SLOWO POWSZECHNE in Polish 7-9 May 82 p 9

[Article: "The Economy and Life -- Contradictions Which Must Be Removed"]

[Text] According to a recently published report on the state of the economy towards the end of last year, one of the most important factors underlying the decline in industrial production in 1980 and 1981 was the diminishing importation of raw and other materials and coproduced components from the capitalist countries. It is estimated that the volume of supply deliveries declined by half from these countries, and this, combined with the steady level of imports remaining virtually unchanged for supply purposes from the socialist countries, brought about a decline of a whole 22 percent in the total size of supply imports.

Of course, this was mainly as the result of a certain feedback, but our export capabilities gradually declined, while the state's balance of payments got worse permanently. As the report says, the limitations on raw materials deliveries for the needs of the chemical industry, light industry, and non-ferrous metals industry and the great limitations on coproduction components for many sectors of the electric-machine industry were especially sensitive. Each of these unbalanced positions, let us add, has its extended effects. For example, the decline of production in the chemical industry directly impacts agriculture's supply of fertilizers and essential pesticides and thereby reduces the size of the product created in this sensitive sector of our economy.

Here is a footnote to the assessment in the report: it is an important fact that last year it was basically only small manufacturing that achieved results on a par with 1980. It is also worth remembering that small manufacturing was working back during the first half of last year under the new principles consistent with the principles of the economic reform presently being introduced. Unfortunately, the first two months of this year in small manufacturing did not show any clearer production increase. Increasingly stronger shortages in the material supply became evident.

The systematic decline in production, caused by the shortage of supplies to factories, consistently created successive negative phenomena, underuse of industry's production potential. Thus, for example, while in 1978 the exploitation of production capacity throughout our industry amounted to about



85 percent, by 1981 the index had reached a level of 60 percent. The specialists estimate here that in the final months of last year, production capacities in mining and power industry approximated 72 percent, those in metallurgy and engineering industry approximated 57 percent, and those in the chemical industry, in light industry, and in the food and building materials industries approximated 60 percent.

On the basis of the above illustration of the status of the economy, insofar as industry is concerned, we can imagine the great difficulty of inculcating the economic reform itself in such a way as to avoid devaluing either its basic ideals or its various concrete principles. The independence of the enterprises, one of the main tenets of the entire design of the reform, alongside the self-financing of the enterprises' economic activity and their self-government, was bound to be limited, by the force of the facts, at least to a certain extent. It is mainly a question of the enterprises which are working in the government operational programs. As everyone knows, these programs were created in a situation in which there were supply shortages, and the object was to provide an incentive for the production of vital goods.

On the other hand, the thing is that participation in these programs was extremely disturbing for many economic managers. They provide, or at least they should provide, clear supply priorities. This great emphasis, on the other hand, created a secondary phenomenon, whereby these programs showed a very marked increase. As a result, the priorities remained on paper to a great extent, and the order-directives method of management of the enterprises actually remained in force. I believe that this contradiction should be eliminated as soon as possible.

10790

CSO: 2600/587

## CITIZENS' COMPLAINTS, GRIEVANCES TO PARLIAMENT TRIPLED

Warsaw SLOWO POWSZECHNE in Polish 10 May 82 p3

[Interview with Deputy Eugenia Kemparowa, vice chairman of the Sejm's Commission on Administration, Local Economy, and Environmental Protection, by Kazimierz Klos: "The Sejm Vis-a-vis Citizen Complaints and Grievances"]

[Text] [Question] The number of complaints, grievances, petitions, and comments which citizens have sent to the Sejm during the past 2 years has increased many times. As the Sejm Commission on Administration, Local Economy, and Environmental Protection was told, in 1981 the Sejm received about 23,000 letters of that sort, compared to about 8,000 in 1980. What does this indicate in your opinion, Madam Deputy?

[Answer] There are various reasons why the number of complaints and comments nearly tripled last year. First of all, I should like to point out two contrasts, both the result after all of the political situation in our country. Citizens are becoming more and more courageous about the undoubted development of democratic forms of life and the promise to maintain this direction in the future. They believe in the effectiveness of the intervention of the institutions which they have elected. They think -- and they are right -- that this is some sort of participation in the improvement of the republic. On the other hand, there are a number of malcontents with unjust, emotional, unjustified attitudes towards any sort of authority. Their complaints are usually anonymous. In their circles criticism for the sake of criticism has become not so much a civil need as a fad. Another thing is that the heartlessness still found among many bodies of the administration and the economy and the bureaucratic way officials operate on various echelons were particularly tempting for these citizens.

Finally, we are seeing a rise in the number of complaints and grievances sent to all state bodies, the NIK, and the party. The Sejm called for greater social criticism, and the citizenry believes that it can now call on the state administration at the various levels to carry out their just demands and rights.

[Question] After all, they have a basis for such belief in the legal documents recently issued...

[Answer] Of course. To a great extent the modernization of the Administrative Procedure Code contributed to this. The constitutional right to lodge complaints and register grievances was expanded and made more concrete. The revision listed bodies, ways of handling things, and deadlines. Here we must also remember the previously unknown court control of administrative decisions. The very possibility of such control is already helping the upgrade the work of the administration, in the view of our commission.

The Supreme Administrative Court serves as a watchdog over the legality of decisions, and the fact that a decision in question can be overturned by the NSA contributes to care in decision-making and to greater knowledge on the subject. It would seem that the administration is trying to keep its decisions from being overturned, and therefore to avoid the reversals is trying to see that they are consistent with the law in every way.

[Question] Citizen complaints and petitions, as has already been said, come from two sources and are of two kinds. They are a signal of a concrete wrong, and of the citizen's confidence in the Sejm, but in toto they are also an important source of information concerning the improprieties occurring in the country. Generally speaking, can you specify the subjects which come up over and over again most frequently in the complaints?

[Answer] Of the complaints sent to the Sejm, 42 percent concern questions of quarters, which proves eloquently the tremendous housing problem in the country. Twenty percent concern construction (for example, renovation, the quality and scheduled on-time completion), and 10 percent relate to improper local administration. There has been an increase in the percentage of complaints and suggestions in the area of environmental protection, which shows the development of the ecological movement and the observation of threats from the uncontrolled development of industry.

Our Commission (the Sejm Commission on Administration, Local Economy, and Environmental Protection--editor's note) makes an analysis not only of those matters which come to it but also of those sent to the Ministry of Administration, Local Economy, and Environmental Protection. We do not just want to see whether the ministry and bodies subordinate to it are handling the matters quickly and efficiently in formal terms. We are also interested in seeing the sort of social effectiveness of the citizen-official feedback included in the handling of intervening action. And insofar as we can determine the subject matter of the complaints, the formal course of their handling, to this extent we are still looking out for more information on the effectiveness of complaints, whether as a consequence improvements have been made in certain areas of social life.

[Question] No analyzing institution?

[Answer] To a certain extent. The deputies' lack of information on the subject of the effectiveness of complaints and suggestions in terms of the meritorical aspects as well as the formal ones was demonstrated and was the reason for the creation in 1981 of a special Sejm Commission on Complaints and Suggestions. The assumption was that this commission would not review individual citizen complaints, because that is the job of the Sejm office, the Sejm commissions, and appropriate agencies and organizations, but it has the right to ask for information and to analyze complaints as well as to investigate how effective their handling of them is to improve the state administration and economy. The commission has not been long in operation. Therefore there is not the proper cooperation yet between it and the rest of the Sejm commissions.

The specialist commissions' deputies count on the Commission on Complaints and Suggestions to advise them of the need for changing improper practices regarding the application of the law, whenever this has become the source of complaints, and the need for filling legislative gaps revealed by the complaints. This is a tremendous task for this commission.

We have considered it an urgent task to draw up the principles for effective cooperation, possibly at a joint session of the Sejm Presidium and commission chairmen.

[Question] Alongside the improvements in the legislative system, are there any other general conclusions concerning the effectiveness of the state administration brought to light up until now in the analysis of the complaints and suggestions?

[Answer] The fundamental condition for improving the work of the administration, as we have seen not only from analysis of the matters coming in to the Sejm but also from the deputies' observations, consists of personnel, not only their shortcomings but to an overwhelming extent their low level of qualifications, especially in the field. It is true that a personnel monitoring process is going on. The pragmatic procedure to be followed by the state administration employee is also being prepared in the form of a legal document. For example, qualifications are being tightened, but the deputies are turning their attention to the need to create a system of education for the intermediate-level administration personnel, for all echelons of officialdom out in the local areas. In the curricula of post-secondary studies a greater number of hours should be devoted to administrative procedure too. The Commission on Administration, Local Economy, and Environmental Protection intends to present the chairman of the Council of Ministers with an appropriate statement of what it considers essential in this matter.

[Answer] Thank you for the interview.

10790

CSO: 2600/589



## CONSTRUCTION OF BELCHATOW MINING, POWER INDUSTRY COMPLEX DESCRIBED

Warsaw CZASOPISMO GEOGRAFICZNE in Polish No 3, Jul-Sep 81 pp 285-296

[Article by Anna Niznik, Institute of Geography, Lodz: "The Influence of the Construction of the Belchatow Mining and Power Industry Complex on Geographic Organization"]

[Text] Summary of the contents. The article deals with the problems of territorial management linked to the construction of the new mining-power industry complex. It presents, in succession, the location, the area and the boundaries of the Belchatow Industrial District, the brown coal deposits occurring there and the concept of the development of the district, as well as the degree of implementation of investments already underway. The author likewise points out both already executed and anticipated changes in the organization of district management.

All operative industrial facilities, especially those whose production activity is based on the extraction and processing of mineral raw materials, cause considerable destruction of the natural environment, changes in the sedimentation network and socioeconomic changes. This primarily refers to those facilities that mine raw materials using a strip-mining system. Brown coal mines use such a system. Electrical power plants, which likewise have an unfavorable effect on the immediate surroundings, are located right next to them. The consequences of the harmful effect on the environment, both of brown coal mines and the electrical power plants connected with them, are spread out over time, although they are usually built together. As we observe the changes taking place in an area where mining and power industry investments are already underway, we are not only able to evaluate the damage being done but we can also uncover the mechanism of the process of environmental reconstruction, and we can appraise newly created ecological conditions. This is all the more important in that the growing need for energy will stimulate the process of building brown coal mines and electrical power plants. This process in Poland is systematically gaining in intensity.

The Belchatow Mining and Power Industry Complex (ZGE), whose construction was undertaken during the second half of the 1970's, will broaden the scope of the power industry in Poland based on brown coal for the final 20-year period

of our century. The construction of the Belchatow ZGE initiated the creation of a new territorial concentration of industry in the Belchatow Industrial District (BOP).

#### The Location, Area and Boundaries of the District

The BOP is still not marked out on economic maps of Poland. This is because this district is still under construction, although for several years it has been spoken of and written of more and more frequently. The foundation of BOP construction is the ZGE which, by the end of 1981, is to supply electrical power for the domestic power network through the burning of brown coal occurring in this area.

Regional planners for the BOP include in it two cities and eight gminas located in the southwestern part of Piotrkow Voivodship: the cities are Belchatow and Piotrkow Trybunalski, the gminas are Belchatow, Kamiensk, Kleszczow, Kluki, Rzasnia, Sulmierzyce, Szczercow and Wola Krzysztoporska. The BOP is located entirely on the area of Piotrkow Voivodship; however, in the future it will extend beyond the boundaries of this voivodship, partly due to investments accompanying the power plant that has been built.

A characteristic of the BOP location is its setting at the juncture of three voivodships, Piotrkow, Sieradz and Czestochowa. Thus, the district has the possibility of cooperation with neighboring voivodships.

The BOP according to its current boundaries, covers an area of 1,069 km<sup>2</sup>. This is 17 percent of the total area of Piotrkow Voivodship and 0.3 percent of the total area of the country.

#### The Belchatow Brown Coal Deposit and Its Characteristics

The Belchatow deposit was discovered in 1960 in the environs of the village Lekawz-Piaski on the Widawka River, located about 15 km south of Belchatow. Geological studies conducted here from 1959 to 1964 by the Central Geological Office uncovered the existence of a coal seam 60 meters thick, and further geological penetration led to the discovery of coal reserves on the order of 2.2 billion tons. Penetrative drilling and studies based on gravimetric surveys within a short time led to the contouring of the compass of the newly discovered deposit, detection of the conditions of the occurrence of the seam, as well as to an evaluation of the water conditions of the deposit and the surrounding region. It was discovered, among other things, that the length of the entire deposit zone amounts to approximately 40 km, and its width varies from 1.2 km to 2.5 km, whereas the total thickness of the overburden covering the deposit varies from 100 meters to 200 meters and averages approximately 145 meters.

The Belchatow coal deposit occurs in the Kleszczow trough fault, made up of Mesozoic formations which are composed primarily of Jurassic limestone and marl, gault and chalk gault. The fault is filled out with Miocene and Pliocene formations, and it is covered with Quaternary drifts, whose thickness sometimes reaches 300 meters [See bibliography: Klatka, Ziomek, 1979, p 20]

The natural conditions of the occurrence and the geological formation separate the brown coal deposit into three fields. The western part of the deposit is the Szczercow field; the central part is the Belchatow field, and the eastern part is the Kamiensk field. The Belchatow and Szczercow coal fields are separated by a salt dome. The recoverable reserves of these fields, which amount to 2 billion tons, will be mined.<sup>1</sup> The Szczercow and Belchatow fields extend for a distance of 20 km, and their mean width is 1.5 km.

Approximately 60 percent of the detected coal reserves are in the Belchatow field. This deposit will be mined first due to the greater amount of reserves, the larger share of noncohesive soil in the overburden and the smaller percentage of sulfur contained in the coal. The mean thickness of the coal layers here is 54.5 meters. The coal occurs under a layer of overburden with an average thickness of 154 meters. The field covers an area of 18.5 km<sup>2</sup> and extends for a distance of 12 km. The exploitable brown coal reserves amount to 1.2 billion tons, and ultimate mining should yield approximately 40 million tons annually. Mining is to begin in the second half of 1981. The coal in this field has a calorific value of 2,159 kcal/kg.

The Szczercow field deposit is to be the next to be mined. It extends for a distance of 8 km. Its recoverable reserves amount to 820 million tons and it has 680 million tons of exploitable reserves. The ultimate mining of coal from this deposit is to yield 18 million tons annually, and mining is to begin in 1987. The mean thickness of the overburden on the deposit is 130 meters, the thickness of the coal seam averages 59.4 meters, and the calorific value is 2,002 kcal/kg [See bibliography, Kozlowski, 1979, p 9].

It should be added that the entire mass of the Belchatow coal deposit is energetic, but only certain portions of it are made up of briquette coal.

#### The General Concept of Construction of the ZGE

The already described brown coal deposit is the basis of development of the BOP represented for the present by the Belchatow ZGE. The ultimate mining capacity of the Belchatow mine built here has been projected at 38 to 40 million tons per year. In order for this mining capacity to be achieved, in the course of a year an overburden of from 110 to 130 million cubic meters will have to be cleared [See bibliography, Kolkiewicz, Kozlowski, 1974, p 351]. This necessitates the use of basic mining machinery heretofore unknown in Poland. According to assumptions, the overburden is to be cleared with the use of three wheeled excavators produced in the FRG by the Krupp firm, and the overburden is dumped with the use of four dumping conveyors produced in the GDR. The brown coal to which these machines will have dug down will be mined by using four wheeled excavators also manufactured in the GDR. Belt conveyors are to be used to transport the overburden and coal because of the large masses being moved and the great distances they must be moved. This type of transport system will be retained.

As noted above, along with the construction of the mine, a power investment is also being implemented--the Belchatow I electrical power plant (in Rogowiec). A second electrical power plant, Belchatow II, (in Osiny) will be built next.

When completed, the Belchatow I power plant is to have a capacity of 4,320 megawatts. It will be the first electrical power plant installed with 12 power units, each having a capacity of 360 megawatts. Annual net power production will reach approximately 26.7 billion kilowatt-hours, and the annual time for utilization of the installed capacity will be 6,530 hours. Belchatow I will be one of the largest electrical power plants in the world operating on brown coal. That this is a tremendous endeavor is demonstrated by the fact that the installed capacity will exceed the capacity of all domestic power plants operative in 1978 by 25 percent, and the electrical power generated will likewise amount to approximately 25 percent of all domestic electrical power.

The following factors help to create the exceptionally favorable technical-economic indexes of the electrical power plant: its location in direct proximity to the mine and the short distance from electrical power receiving stations. Locating an electric power plant with such a great capacity in the center of the country means that it will be the electrical power plant with the highest capacity concentration, at least until 1985, and the radius of its feed will not exceed 150 km. This radius will include such large cities as Lodz, Warsaw, Kielce, Krakow, Katowice, Opole, Wroclaw and Kalisz. [See bibliography, Niznik, Paczka, 1979, p 71] The area of 16 voivodships, with a population of approximately 13.5 million, or nearly 40 percent of Poland's population, lies within 150 km of the power plant. This situation increases the significance of the electrical power plant in central Poland. It should also be emphasized that the central location of the power plant in the country will limit outlays for the construction of a transmission network, reduce costs of transmitting electrical power and, above all, improve the stability of the operation of the domestic power system.<sup>2</sup>

The construction plan for the Belchatow ZGE prepared by architects projects the implementation of accompanying investments. The construction of housing and service facilities is planned, as are the modernization and reconstruction of highways and the construction of a railroad line from Piotrkow Trybunalski to the Belchatow mine and electrical power plant. The reconstruction of the old sedimentation system and the recultivation of lands destroyed by mining, among other projects, are also planned.

#### Current Progress in the Construction of the Investment

Mining at the strip mine was begun in 1977, but preparatory work in this area was undertaken in 1973. This included draining the deposit, for which pumping was begun in 1975. A well system is used for this. The depth of the well, depending upon the depth of the mine, varies from 120 meters to 400 meters. At a depression of 90 meters surrounding the digging, the flow amounts to 320 cubic meters per minute. Mine waters are discharged into the Widawka River [See bibliography, Kozlowski, 1979, p 9]. The draining of the deposit has caused the water in farm wells to disappear. In order to compensate farmers for the disappearance of the water in their wells, water supply systems and individual water intakes are being built in the region of the mine depression.

One of the first investments of the Belchatow brown coal mine, an indispensable one for the preparatory work front, was to shift the bed of the Widawka River for a section of 3 km and to regulate this riverbed for a section of



3.3 km. This investment made possible the designation of a location for digging accessible to a deposit for mining in the former village of Piaski, as well as providing a location for a dumping ground for the overburden near the digging. The opening of the mine and the startup of the first system (Excavator--belt conveyor--dumping conveyor) took place in June 1977. Three such systems are currently in operation. The first excavator for mining coal has also been erected. Since belt conveyors are used to transport the overburden and then the coal, at the end of 1979, an important accompanying structure, the Stomil Rubber Conveyor Belt Factory, was built and put into operation. This factory is located next to the Belchatow I electrical power plant in Rogowiec.<sup>3</sup>

The basic facilities structure, including the administrative building of the mine directorship, are centrally located 1 km north of the strip mine, near the new electrical power plant.

The advanced stages of progress on the construction of the Belchatow I electrical power plant in Rogowiec have also been reached. For the construction of this structure and its facilities, lands were expropriated that were formerly the villages of Ruszczyn and Rogowiec, and a section of forested areas was likewise deforested and cleared. A road connecting Slok and Wola Grzymalina, which ran through the construction site of the power plant, has been moved. The construction of the first two power generating units with a capacity of 360 megawatts each is nearing completion. The first of these is to be put into operation by the end of 1981, the second and the third--in 1982 and two more are to be made operative during each succeeding year. In 1977, the construction of the first chimney 300 meters high was also completed. The chimney is to serve six units. For technical reasons, the chimney had to be completed before the electrical power plant was put into operation. A chimney cooling system 136 meters high has likewise been built, and others are being implemented. In addition, water reservoirs have been built in Bialy Lug and Slok, making a vital change in the landscape of the region.

A railway line has been constructed from Piotrkow Trybunalski to the ZGE, through Belchatow. While it mainly will serve the needs of the ZGE, it is also to be used for a passenger travel. In 1978, a municipal bus system was put into operation along the Belchatow-Rogowiec route. This has taken the strain off the outlet roads from Belchatow considerably. New highways have been built, and the old ones have been modernized.

Beside investments, work is being done aimed at creating the proper social-living conditions for the ZGE work forces. Housing construction is being implemented on a large scale in Belchatow and Piotrkow Trybunalski. In Belchatow, mine and electrical power plant workers have been housed in the First of May Housing Estate East, the Swierczewski Housing Estate, in Okrzej and Lower Silesia. The Young Worker's Home, the Power Engineer's Home and workers hotels are also being used. Communities of single-family low-rise cottages are being implemented for the highly qualified cadre. A heating plant and heating lines have been constructed. A sewage treatment plant is also in the process of being implemented. Both of these investments are located between Belchatow and Grocholice<sup>4</sup> [See bibliography: Niznik, Paczka,

1978, p 107]. Belchatow, which has become a housing center for miners and power engineers, is undergoing general reconstruction. A PKS [State Motor Transport] base and a social and gastronomic services complex have been built for city residents and employees, and the construction of a hospital, a trade school complex, an automatic telephone central office, etc., is being implemented. The implementation of the above investments is not taking place without personnel and supply problems, as well as objective problems emanating from the geological formation of the brown coal deposit. Large boulders are found in the deposit, which hamper the efficient operation of overburden excavators and belt conveyors. Local confined aquifers and the like also cause problems. Despite difficulties and certain delays, the structures of the mine and the electrical power plant are ready for operation. A coal storage site, at which reserves from the first seams already dug up will be stored, is in the final stages of completion.

#### Anticipated Changes in the Territorial Structure of the District

The general concept of BOP development envisages the most intensive development for the city of Belchatow, which will be the major housing and services base for the ZGE work force (80 percent of the construction program). Construction for district needs will likewise be located in Piotrkow Trybunalski.

The implemented investments will bring about an increase in the population and will cause considerable demographic changes in BOP structural units and its particular settlement units. In 1990, the Belchatow district will have 216,000 inhabitants, or 77,000 people more than in 1975. It is forecast that Piotrkow Trybunalski and Belchatow will have 150,000 inhabitants, whereas 22,000 people will be living in the larger settlement units. In particular BOP structural units, the growth rate of the population will vary. The greatest increase (more than double) will be in the city and gmina of Belchatow. Centrally planned cities and locations will have the greatest increase in population. According to assumption, by 1985 Piotrkow's population will increase to 85,000, and Belchatow will grow to 30,000.<sup>5</sup> A considerable population increase is likewise forecast for Kamiensk, Sulmierzyce and Szczercow. In 1990, Kamiensk and Szczercow will have 8,000 inhabitants each and Sulmierzyce will have 6,000 inhabitants [See bibliography: Niznik, Paczka, 1979, p 91].

According to predictions, Piotrkow Trybunalski will then have a population of 120,000. The implemented mining-power industry investment will double the BOP city resident population. Thus, it will be a stimulus for the development of urbanization processes. In the BOP, Piotrkow Trybunalski will function as the capital of Piotrkow Voivodship and a center of regional and national significances. The housing factory built in this city, with a production capacity of 12,000 housing units per year, will increase the city's role in serving district needs.

Belchatow, which is smaller than Piotrkow Trybunalski in size, will also be a center of regional and national significance and will primarily fulfill housing and services functions.

The central areas of particular structural units in the Belchatow district--Kamienisk, Sulmierzyce, Szczercow and Wola Krzysztoporska--will be centers of voivodship significance, primarily fulfilling housing functions. Wola Krzysztoporska will likewise fulfill an industrial and transportation function. Kamienisk and Sulmierzyce will be important agriculturally and industrially; Szczercow will have a recreational function.

The Belchatow investment will bring about changes in the employment structure of the district population. Between 1975 and 1990, the number of positions available in agricultural and forestry work will diminish by approximately 20,000 jobs; meanwhile, employment in industry and construction will grow by 29,000 jobs; other nonagricultural sectors will employ 14,000 more workers. This general employment increase (23,000) will make necessary an influx of the work force from outside, since human resources within the BOP will not be able to meet the growing need. According to planning assumptions, there will be a good deal of commuting to work and migration from other areas. These processes are already gaining in intensity and they will accompany the implemented investment for a considerable time. The BOP needs and will continue to need a low-qualified work force, as well as many specialists. Employees will come in not only from BOP rural areas and Belchatow and Piotrkow Trybunalski, but also from beyond the BOP, from the Piotrkow and Sieradz voivodships and more distant areas. The sources from which the work force will be drawn will be an area situated within a radius of 50 km from Kleszczow, which may be treated as a central point of the mining basin.

The development of the fuel-power industry in the district will cause accompanying investments to be made linked with the comprehensive development of the BOP. These will include: construction materials, aggregates and gas-pressurized concrete works, limestone-sand plants and the expansion of the Pioma Mining Machinery Factory in Piotrkow Trybunalski. Within the framework of supplementary industry, the expansion of the agricultural-food industry is anticipated. For the purpose of guaranteeing positions for women, the development of the electronics industry or other precision-tools industry is anticipated.

Changes will also occur in farming as a result of the BOP construction. Both the amount of cropland and the number of persons employed in agriculture will diminish. The high level of agricultural employment in the district will decrease gradually, not only because of labor mechanization and an increase in the general level of agriculture, but primarily as a consequence of a reduction in cropland area. According to forecasts, by 1990 this area will diminish by 5,400 hectares. The negative effect of the BOP investment on farm production--in addition to reducing cropland area--will be expressed in terms of the shifting and degradation of soils in the region of the cone of depression, as well as in the degradation of the biological activity of the environment emanating from soil sulfurization and acidification. This negative effect accompanying the investment will be reduced in part through the intensification of production processes in agriculture, structural and organizational changes and changes in the technology of farm production. Moreover, approximately 1,100 to 1,500 hectares of forest lands will be withdrawn from use. These will be protected areas surrounding the dumping ground, the electrical power plant and the ash storage dump. While these lands will have restricted usage capability, they will not be expropriated.

The further reconstruction and expansion of the transportation, highway and railway system, adapted to the distribution of work locations and residences, is becoming a vital element of district development, underscoring the Belchatow-ZGE transportation link. The system of roads will be linked up efficiently with nearby housing, services and production center, i.e., with Piotrkow Trybunalski, Pajeczno and Dzialoszyn, as well as with Radom, Pabianice, Lasek and Lodz. It is anticipated that the roads in these directions will be modernized and PKS buses will run on the more important ones.

The construction of the ZGE, necessary from the viewpoint of the domestic power situation and the need to limit hard coal consumption for power purposes, is the first such investment being conducted in Poland on such a broad scale.

As mentioned above, the investment presents many problems, both in terms of the construction of the ZGE and for the organizers of territorial development, since the construction of this type of industrial complex causes inevitable changes in the natural environment, including its degradation. The scope of environmental destruction in the BOP encompasses not only the mine and power plant areas, but also the area of the range of the cone of depression, which occupies more than 1,300 km<sup>2</sup>. The burning of coal in the electrical power plant, which will take place at the end of 1981, will initiate a process of air, soil and water pollution. Then, the problem of protecting the natural environment against the negative consequences of the ZGE will manifest itself more sharply than at present. Undoubtedly, it will be impossible to avert this negative effect completely. ZGE architects, future users of the mine and the electrical power plant and other management organizers, in the BOP will have to make full use of the achievements of science and will have to do their best to see that the power benefits do not mask the need to take proper action toward protection of the natural environment and rational territorial development. We presume that the law concerning environmental protection and development (DZIENNIK USTAW No. 3, 11 February 1980) will foster this action, as will the results of studies on the changes occurring in the environment because of the Belchatow ZGE.

#### FOOTNOTES

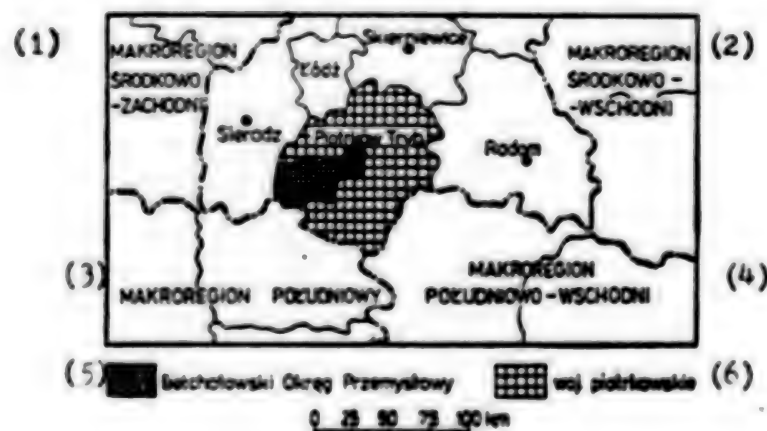
1. The Kamiensk fields, due to the unfavorable index of the coal overburden, are not projected for exploitation, although the recoverable coal reserves are estimated at approximately 140 million tons. However, the possibility is being considered for using this coal as a reserve. Associated with this, the external dumping ground, which is partly located on this field, is to be remodeled.
2. The capacity of the electrical power plant Belchatow II (Osiny) has been put at 21,160 megawatts. Six power units, with a capacity of 360 megawatts each, will be installed in this electrical power plant. The ultimate production of electrical power will amount to 14 billion kilowatt-hours annually.
3. This factory primarily will serve the needs of the coal mine. In 1985, the length of belt conveyors used in the process of mining exploitation and in the electrical power plant is to reach approximately 80 to 100 km.



4. Grocholice is a new functional city section of Belchatow. It is the oldest, earliest settled element in the city (city status was attained in 1420). The community was annexed to Belchatow in 1977, thanks to which Grocholice indirectly regained its former municipal functions, which it had lost (like Belchatow) in 1870.
5. In 1975 Belchatow had 10,800 inhabitants, and in 1978 it had 22,600 inhabitants. For the same years, Piotrkow Trybunalski had 64,200 and 68,900 inhabitants respectively.

#### BIBLIOGRAPHY

1. Klatka, T. and Ziomek, J., "Geological Formation," WOJEWODZTWO PIOTRKOWSKIE. MONOGRAFIA REGIONALNA, Lodz-Piotrkow Trybunalski.
2. Kolkiewicz, W. and Kozlowski, Z., "Basic Machinery of the Belchatow Mine." GORNICTWO ODKRYWKOWE, No 10-11, 1974.
3. Kozlowski, Z., "The Belchatow Brown Coal Mine" in materials from a conference entitled "Basic Problems of Territorial Development in the Belchatow Industrial District" [Podstawowe problemy zagospodarowania przestrzennego Belchatowskiego Okregu Przemyslowego] Warsaw, 1979.
4. Niznik, A. and Paczka, S., "Directors of Change in the Territorial Structure of Belchatow," STUDIA REGIONALNE, Volume II (VII), 1978.
5. Niznik, A. and Paczka, S., "The Belchatow Mining-Power Industry District" [Belchatowski Okreg Gorniczo-Energetyczny], Lodz.
6. "Statistical Yearbook of the Piotrkow Voivodship for 1979," [Rocznik statystyczny wojewodztwa piotrkowskiego 1979], 1979, Piotrkow Trybunalski.



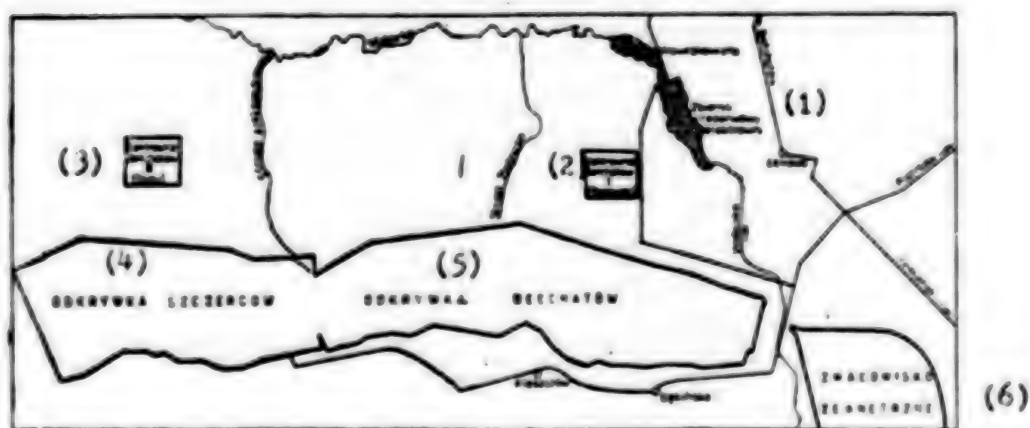
Ryc. 1. Położenie Belchatowskiego Okręgu Przemysłowego.

Fig. 1. Location of the Belchatow Industrial District.

Figure 1: Location of the Belchatow Industrial District

Key:

1. Central-western macroregion
2. Central-eastern macroregion
3. Southern macroregion
4. Southeastern macroregion
5. Belchatow Industrial District
6. Piotrkow voivodship



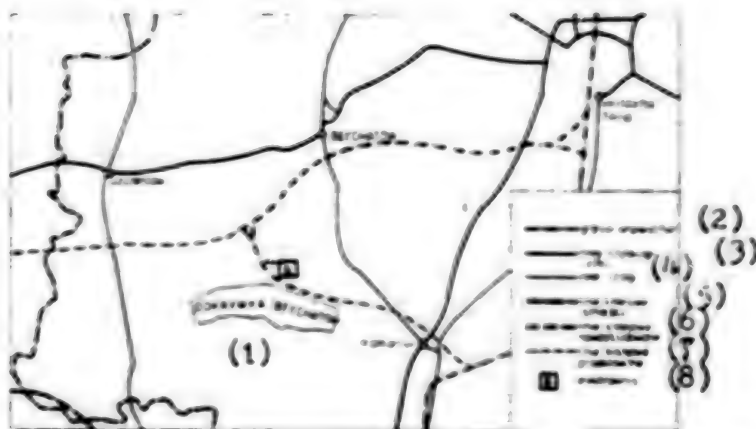
Ryc. 2. Schemat rozmieszczenia pól węglowych i elektrowni.

Fig. 2. Distribution of coal fields and the power stations.

Figure 2. Distribution of Coal Fields and Power Stations

Key:

1. Reserve reservoir for the electrical power plant
2. Belchatow electrical power plant I (Rogowiec)
3. Belchatow electrical power plant III (Osiny)
4. Szczercow strip mine
5. Belchatow strip mine
6. External dumping ground



Ryc. 3. Położenie Zespołu Górniczo-Energetycznego „Bełchatów” na tle układu komunikacyjnego.

Fig. 3. Location of the "Belchatów" Mining and Power Industry Complex on the background of the transport system.

Figure 3. Location of the Belchatow Mining-Power Industry Complex Against the Background of the Transportation System

Key:

1. Belchatow strip mine
2. Voivodship boundaries
3. Major highways
4. Other roads
5. Existing railway lines
6. Newly built railway lines
7. Projected railway lines
8. Electrical Power Plant

8536

CSO: 2600/525



## BETTER USE OF PRIVATE FARM POTENTIAL URGED

Bucharest REVISTA ECONOMICA in Romanian No 15, 16 Apr 62 pp 12-13

[Article by Dr Mircea Bota: "Reserves for Increasing the Agricultural Production on the Farms of the Population"]

[Text] In accordance with the principles and norms of territorial self-supply and self-management, steps to utilize all arable land at a higher level and to develop numerically and qualitatively the livestock populations are being taken in each rural locality, on each farm and in each agricultural enterprise. At the same time, the actions for increasing the production of cereals, meat, milk and other agricultural products have in view the better utilization of the reserves existing on the farms of the population, which constitute--in our economic and social system--a special type of agricultural economic unit, based on personal labor, but indissolubly connected with the socialist economy and intricately integrated into its structure.

The three forms of farms of the population--those of the members of the agricultural cooperatives, those of the peasants in hilly and mountain zones without cooperatives and those of the worker personnel and other working people in villages and cities--have some differences from each other, but also common characteristic traits, by means of which their economic and social nature is made out. For instance, they use the own manpower of the members of the respective families; their activity has a diversified, natural-commodity, mixed economic-functional structure; the incomes obtained (in kind and in money) are correlated with the quantity, quality, importance and effective result of the own effort and contribution of those who receive them; their activity has an indirectly programmed character (it being fitted into the sole national plan), on the basis of the use of specific economic, legal and administrative factors and forms; and their activity has a certain stability and has an important role in increasing the agricultural production, the incomes of the peasants and the well-being of the whole populace.

The importance of the sector of the farms of the population has risen considerably in the current stage, in which the problem of efficiently increasing the agricultural production has been

accentuated by the new conditions of the development of our national economy, by the transition to local territorial self-management and local territorial self-supply of agricultural and food products to the population. In the speech at the plenum of the National Council for Agriculture in February of this year, the secretary general of the party, Comrade Nicolae Ceausescu, said: "It is necessary to give even greater help to the peasants in the zones without cooperatives, helping them with everything that is necessary, including agricultural machines and tools, chemicals and other products, seed and breeding stock, in order to develop the production."

#### The Potential and the Conditions for Utilizing it

The important role of the population's farms in raising the vegetable and animal agricultural production and in increasing the incomes and well-being of the peasantry and the other working people results from the resources that they possess, from the percentage of their participation in obtaining the various agricultural products, from the economic and social functions that they fulfill in our national economy.

The farms of the population possess over 2.3 million hectares of the agricultural area, half of which is arable (15.6 percent and 12.6 percent of the total, respectively). They have 8.2 percent of the pastures, 47.1 percent of the meadows, 37.8 percent of the area of vineyards, 22.1 percent of the area of orchards, 23.4 percent of the area cultivated with corn, 43.6 percent of that with potatoes, greens and melons and 11.6 percent of that with fodder plants. The farms of the population also possess significant percentages with regard to the zootechnical potential: at the start of last year, it represented 38.6 percent for oxen, 43.3 percent for cows and heifers, 27.7 percent for hogs, 43.2 percent for sheep, 42.8 percent for poultry and 84.2 percent for bee colonies. Comparing the percentages of the livestock populations with those of the land areas, we find that the fodder base of these farms is insufficient, which obliges them to use some fodder resources from the outside. The farms of the population also possess a significant volume of household facilities that, with minimum investment costs, permit the obtaining of significant quantities of agricultural products.

One extremely important resource that these farms possess is their own work force, in a complex structure of age and level of training. It is a question, in fact, of almost the whole work force employed in agriculture, to which are added the commuting workers (from nonagricultural branches and activities) who reside in rural areas, the children and the old people in villages and other persons from rural and urban localities who regularly or occasionally, within the limit of the available time, work on their own farm or that of their families.

The farms of the population use a significant volume of resources made available by the socialist agricultural units and by other economic units and cooperative and state institutions, such as state-owned and cooperative pastures, fodder resources from the agricultural, forest, industrial and commercial units, technical resources, supplies and loans provided on easy terms by the state. One extremely important condition, determined by the socialist economic, social and political framework in which the farms of the population operate, is the possibility of procuring their means of production and consumer goods through trade and of selling their production at

remunerative and stimulative prices through the contracting and purchasing system and on the market.

Using these conditions, the farms of the population are making an important contribution to the animal and vegetable agricultural production, possessing significant percentages for some products, as follows from the data given in the table.

Table: The Evolution of the Quantity of Vegetable and Animal Agricultural Products and the Percentages of the Farms of the Population

Products	The Country's Total Output 1980/1965 (%)	1965 (% of the Total)		1980 (% of the Total)	
		Farms of Coop- erative Members	Individ- ual Farms	Farms of Coop- erative Members	Individ- ual Farms
Meat	221.8	43.1	11.5	28.0	14.5
Milk	163.4	40.3	16.0	34.1	22.6
Wool	147.0	32.4	10.1	29.0	13.6
Eggs	255.7	62.0	22.3	44.3	17.2
Honey	186.8	47.7	27.7	43.7	47.3
Corn	189.7	13.8	3.0	13.0	5.9
Beans	113.7	22.6	7.5	22.0	8.4
Potatoes	188.3	35.1	14.0	38.0	20.4
Onions	129.5	39.6	6.4	37.8	11.1
Cabbage	239.4	27.0	6.6	33.3	12.1
Tomatoes	228.8	21.2	3.3	36.8	6.1
Grapes	142.4	31.1	2.7	31.3	4.5
Fruit	122.4	45.2	30.1	40.1	22.2

#### The Characteristics of an Upward Development

For the population's farms as a whole, some significant characteristics and trends stand out against the background of the general development of agriculture in the past three decades: the continual growth of the effective quantities of animal and vegetable products obtained; the maintenance or even the growth of their percentage on the whole for the main vegetable and animal products, except for a few (for instance, meat and eggs) for which the production has risen at a steadier rate in the socialist agricultural units; in comparison with the farms of the CAP [agricultural productive cooperative] members, the individual farms, especially those in hilly and mountain zones, have registered a steadier rate of growth of the outputs--and, on this basis, their percentage has increased for the majority of the above-mentioned animal and vegetable products. Correlating the percentages of the livestock populations and of the animal and vegetable production with the percentage of the agricultural area on the farms of the population, one notices these farms' characteristic--with an upward trend--of processing biologically and productively their own resources and those received from the outside, in agricultural branches and activities with a multilateral, intensive and efficient character, which are situated predominantly in the higher phases of the agricultural-production circuit (the production of meat, milk, wool, eggs, cheese, potatoes, greens, fruit, bee honey and so on)--a characteristic that amplifies the role of the farms of the population in the better utilization of primary agricultural resources, through the obtaining of a greater quantity of better nutritive ingredients.

The economic, social and political functions that the farms of the population in our country are fulfilling in the current stage can also be made out on the basis of the above-mentioned aspects. Of them, we mention: the providing of a part of the local supply of agricultural and food products for feeding their members and the other citizens in villages and cities under the conditions of territorial self-supply; the contribution to the supplying of agricultural raw materials to industry; the participation in exportation with a significant volume of products in diversified assortments and of high quality; the fuller and more efficient utilization of the work force; the raising of the incomes and the standard of living of the possessors of farms; and the positive influence in stabilizing the population in rural areas and in hilly and mountain zones.

#### **Orientations for Improving the Activity**

So that these functions can be fulfilled at a higher level, we consider it necessary—in supplementing the steps taken recently on the initiative of the party and state leadership—to orient the activity of the farms of the population in the following directions:

The improvement of the structure of the agricultural areas that they possess according to categories of use. In this regard, we feel that the percentage of the area occupied by vineyards and vine nurseries—9.48 percent of the entire agricultural area that the farms of the cooperators have (as compared to 1.73 percent for agriculture as a whole)—could be reduced (especially as many of the personally owned vineyards of the cooperators in flat zones are old, incomplete, poorly productive and located on fertile arable land), for the sake of increasing the areas occupied by fruit trees and technical and fodder plants. The fact that only a small part of their grape production is used as table grapes or is delivered to the state supply, the rest being utilized in winemaking, also argues in support of this proposal;

The improvement of the structure of the areas with different crops, by further increasing the percentage of the cultivation of corn, potatoes, greens, melons, early-maturing vegetables (in heliogreenhouses) and technical and fodder plants, by increasing the percentage of the double crops (barley-corn, rape, green mass-corn), by expanding the companion crops (beets among fruit trees, beans and pumpkins among corn) and the successive crops of vegetables; and so on;

Regarding the dimensioning of the farms of the population, we feel that a system that would stimulate better the utilization of the potential of the members of these farms for personal diligence and labor should be instituted;

The intensification and diversification of the cooperation with the activity of the socialist units, on the basis of stimulative and equitable criteria, in order to satisfy social needs and requirements concerning the raising of the agricultural production and the selling of it to the state supply;

The hastening of the application of the measures established with regard to the providing of greater help by socialist industry, the agricultural-mechanization stations, the socialist agricultural units and the local state bodies along the line of helping out with machines and furnishing agricultural tools, chemical products, seed, breeding stock, construction materials and services.



By utilizing this help and the advantages created by means of the new contract and purchase prices, orienting themselves particularly toward the products most needed in the balance of the territorial self-supply of each county and each locality, for the obtaining of which they possess favorable conditions, and increasing their deliveries to the state supply, the farms of the population can and must contribute to the growth of the agricultural production, to the general raising of the level of the Romanian village.

12105

CSO: 2700/272

## LAW PROVIDES NO INCENTIVES FOR FOREIGN INVESTMENT

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 26 Apr 82 pp 33-34

[Article by Milan R. Kovacevic, Belgrade]

[Text] The number and volume of foreign investments has not equalled the expectations, desires and projections or the total efforts expended in debates, discussions and regulations about them. Recently, as many times before, a new draft law has been drawn up on changes and additions to the Law on Investments by Foreign Parties in Domestic Organizations of Associated Labor. In reading many previous proposed changes in regulations, one gets the impression that we are seeking foreign investments at the same time that we are praying to God that there will be none.

## Limiting Goals

On a number of occasions, numerous disputed remarks have been addressed at the existing Law. In large part they relate to economic conditions of investment. There will be foreign investments, if conditions attract them. Before accepting the investment risk, a foreigner must be able to see the possibility of a satisfactory profit, for with investments there is always the possibility that there will be no gain. Worse, the investment can be lost. The existing Law ignores that crucial feature of investments. Its article 19 prescribes the contractual limit on income for the foreign investor. Another regulation stipulates that, in case of particularly successful operations, when the contracted profit level is passed the foreign investor will be eliminated from the investment project. Profit above the contracted ceiling is used to return and reduce the foreign investment.

This truly incomprehensible condition is found only in Yugoslavia among the countries of the world. Numerous criticisms have come from various countries, but no arguments for maintaining such a provision have been heard. Yet despite that, the proposer of the latest revision of the law has left in the obligation for a contractual limitation on profit for foreign investors. Only the part of that text which specifies the criteria for determining the maximum, and the consequences for surpassing it, have been eliminated. If this change were accepted, article 19 and logic would still diverge.

It should be stated that a contribution to achieving greater operational success is the basic goal of foreign investments. Profit is the marginal part of income that grows as income increases. Limiting a foreign investor's profit also limits his interest in increasing income, and thus restricts the very goal of investment. The Law excludes foreign investments that are capable of achieving high income and profit. Why? Who wants to put a limit on success?

In any case, what foreign investments have resulted in excess profits for foreign investors? Precisely the opposite is the case. The problem is how to create more attractive conditions for foreign investments, if we want to have more of them. The regulation writers stubbornly resist that. Under the conditions of Yugoslav low average profitability, foreign investors are restricted by regulation to less profit than domestic investors can earn. Yet we know very well that domestic investments are not even attractive for domestic investors.

#### What Do We Offer the Foreigner?

When a domestic organization invest in its own operations together with a foreign investor, then according to Article 18 of the Law it must first set aside part of the profit for expanding the material basis of labor, and only the remainder after that has to be shared with the foreigner in proportion to his investment. All taxes and contributions must be covered from the income before the profit of the foreign investor is determined (and these are not small sums). From his profit, he must still pay a profit tax (which the domestic investor does not pay). Thus the Law further draws the foreign investor into a less favorable position than that of the domestic investor. Finally, so that the foreign investor would still be prevented from earning too high a profit, the previously mentioned maximum profit limit must be negotiated. Haven't we solved the problem of foreigners earning too much nicely?

The current Article 18 of the Law made it possible for the contract on investment to "establish" obligations from income that are to be covered before determining the profit in which the foreign investor is to share. For example, this makes it possible for both investors to share the load of income tax, while only the domestic investor bears the part of the tax assessed on his profit, just as only the foreign investor pays the tax on his profit. The change in this article proposes that all "legally determined obligations" be covered from income before determining profit to be shared with the foreign investor. If this change is adopted, then the possibility for balancing tax burdens by contract between the domestic and the foreign investors will be eliminated, at the expense of the latter.

In fact, the profit is not divided where foreign investments are involved. Only an amount due the foreign party is established. Everything else remains for the domestic organization. Therefore, it looks attractive to shear the foreign sheep right to the skin. Haven't we after all gotten to their skin anyway, and aren't potential foreign investors sheep? Who would make an investment from abroad, at least without getting an equal deal?

In contrast to credit, an investment is risky not just in regard to return (which as we have seen, has a fixed upper limit for the foreigner), but also in regard to preserving and regaining the original investment. Besides all that, investment is for a longer term than credit, which even further increases investment risk. While credit has a certain, determined and for quite a while, high interest rate, we permit the foreign investment only a limited maximum profit, or a loss without any limitation. The possibility for a investment to dissipate in losses in other countries is accompanied by the possibility of earnings as its value grows. In other countries, investments are a property without time limit, while here in Yugoslavia they are restricted to a definite time. Therefore, from the beginning our regulations have permitted contracting the current value of foreign investments and contractual simulation of their real value.

Previously, Article 32 of the Law specified that return of investment can be made in "an increased ratio to a reduced amount based on parameters established by the investment contract, depending on the income achieved by mutual operations." In the period since 1978, when this provision took effect, the only problem has been that previously a number of better methods were used for establishing the value of investments, from its weighting "depending on income" alone to others. But there was never a question of the possibility of contracting investment return in "increased" amounts, whenever that was necessary and justified.

Without any explanation, the latest draft of the Law plans to erase the entire cited text of Article 32. If that change is adopted, in the future it will be possible to return to foreign investors only "the value of invested capital," which probably means the nominal amount invested. That would mean a further major and needless worsening of the conditions for foreign investments. Not only would profit be limited on the upper, but not the lower end, but in addition the value of the investment in the future would have an upper limit, the nominal amount invested, while naturally the investment could still be dissipated in losses. It is exactly as if foreign investments were flooding into the country, so that we wanted to select the best among them. Yet the situation, as we know, is completely the opposite.

#### Investment Credits

The lack of a feeling for reality has long characterized the treatment of financing joint investments with foreign parties. The dialogue of the deaf and dumb is supposed to end in a wrong manner, by changing Article 8 of the Law. A new provision is being proposed which says the following: "The investment contract can stipulate that a part of the capital necessary for financing a joint operation may be agreement between a domestic organization of associated labor and a foreign party be obtained as credits or loans, with the provision that repayment of the credit or loans shall be done by the domestic organization of associated labor in which the foreign party has invested from the income of joint operations before its distribution to the parties to the contract. In that case, the capital



obtained through credits or loans are not an investment, and the income realized by operations involving that capital shall be distributed to the parties to the contract in proportion to their investments." This sentence of 80 words cannot be praised for its clarity, but when its sense is perceived, a misunderstanding of several basic notions emerges.

Everywhere in the world, and especially here in Yugoslavia, investments are financed in large part through credits. There is no reason for any difference with investments that are undertaken as joint ventures. Indeed, from the beginning a large number of joint investments have been financed by credits, along with capital investments. Yet since 1978, when the present Law was approved, the agency that approves contracts for investments by foreign parties, without comprehensible reasons, has insisted that joint investments be made exclusively through capital investments. At times that solution suited the investors, but in many cases approval of contracts for joint investments financed both by capital investment and through credit has been preceded by long persuasion and delays before the final approval of the contract. From that it is clear that the proposer of the text cited wanted to eliminate his dilemmas. It is encouraging that finally it has been perceived that joint ventures can be financed through both direct capital and credits.

The proposers, in their long sentence, in which they explain to themselves something already understood, did not include the fate of interest on credit, which naturally "is not an investment." Instead of being paid, that interest "is paid from the income earned by joint operations before the income is distributed to the parties to the contract." In general, that is how capital investment differs from credit. Credits have their price in interest, while investments are reimbursed by a share of the remaining money (after settling all other debts), which we call profit. But in contrast to interest, credit repayment never comes from income.

The way to treat repayment of credits is studied in school and specified in accounting regulations. When clearly acquisition of credit does not increase income, then even the uninitiated would have to perceive that logically, returning credit should not be done as a burden on income. The initiated know that receiving and repaying credits in general have no influence on success. These change the balance of the status of an organization, which through the interest certainly has an indirect impact on operational results. Accepting, granting, returning or repaying credits does not have any direct part to play in operational success. Taking credits initiates, and returning credits extinguishes the obligations that enter into the balance of the organization's status. Settling debts is not connected to specific capital as a source. Thus credit is returned from total available capital, without regard to its source.

Naturally, in order to preserve liquidity, it is necessary to assure that the possibilities for returning credits are coordinated with available income. That income flow comes from amortization of basic resources, reduction of necessary working capital, newly acquired credits, or reinvestment of profit. Yet in no way should repayment of credits be

a deduction preceding the determination of profit. Credit repayment can be financed from the investors' profits, but those profits must be granted to the investors, and then reinvested. It is high time for these elemental things to be understood, and to stop the inexplicable contracting of joint investments without credits, or else with credits that involve deductions and repayments from the investors' profits. We cannot be out of step with the whole world, if we want to have foreign investments.

#### Uncertainty

One of the great obstacles to greater foreign investments is the situation in foreign trade and foreign exchange. Foreign investments are long-term transactions that could bring greater benefits, and are contributing to improving the foreign trade and foreign exchange situations. However, palliative measures that have suspended many regulations do not provide security for foreign investors. In order for the situation to be corrected, it is essential that a certain ratio of exports and imports, and of foreign exchange payments, be approved for joint investments. That ratio could be 1:1, as with long-term industrial cooperation, or some other justifiable ratio. In any case, a once approved ratio together with the contract approval must make unhindered import available for joint investments, until they achieve their planned exports.

The only change in the foreign exchange policy for joint investments is a proposed in Article 27, and it is unclear. It says that foreign exchange from investments can be used "without limitation for the purposes of the contract, with the condition that payments to foreign parties should come from the foreign exchange income realized on the basis of joint operations." The sources for funds to repay foreign parties (to return their investment) remains to be seen when it is done, so that it is truly incomprehensible that utilization of foreign exchange from the foreign investment at the very beginning, depends on this foreign exchange income.

With their features and possibilities, foreign investments can contribute significantly to both internal and foreign stabilization of the Yugoslav economy, but present conditions for foreign investments obviously are not attractive enough. If by changing the regulations we hope to make them more attractive, not only must we not ruin the existing conditions, but we must truly improve them. The present proposers of changes seem to have forgotten that.

12131

CSO: 2800/375

FARMERS NOTE PROBLEMS IN COOPERATING WITH SOCIALIZED SECTOR

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 28 Apr 82 p 11

[Article by Djura Djukic]

[Text] Excerpts are presented from a discussion of individual agricultural producers (regarding concentrates, zadruga bureaucracy and other topics.)

One frequently hears about forming associations of agricultural workers. It is the daily theme of many meetings, and various agricultural experts and politicians are always talking about it. Least often, the farmers themselves talk about it. They are rarely found at those meetings, and even when they come, they have little to say. Thus when the farmers say something about forming cooperatives themselves, it sounds more authentic than from other sources.

At the recent Assembly of the Yugoslav Zadruga Alliance, a number of farmers spoke. The figure has been published that there are about 300,000 farmers in associations in Yugoslavia, and that there are about 1.3 million farmers who in various ways cooperate with the socialized sector. In the country, however, there are about 2.5 million individual farms. It is also estimated that there are about 1.5 million "retirement" hectares, where little modern agritechnology is used.

We cannot be satisfied with the results of association, according to farmer Dobroslov Nikodijevic. The law is not respected sufficiently. There are few young people in the village, and production is very unstable. We have no security. Prices change quickly, several times a year. If we make an agreement in advance on the price of corn, and we are unable to stick to the price, that is a failure. I ask: If the price of concentrate is 23 dinars, is it worthwhile to sell corn for 8.5 dinars and buy concentrate for 23 dinars? You don't need any pencil lead for that!

We cannot accept the behavior of fertilizer producers who offer us fertilizer with the stipulation that we must agree to cover their losses. They seek foreign exchange for their goods. Will the day come when we farmers will ask foreign exchange for our products?!

Association as we have conceived it will move more quickly here in Serbia if we have security for at least a full year, security in planning our production. Yet no one accepts the responsibility for the fact that there is no such security.

#### Two Moods

Stevan Jelenkovic, also a farmer, says that the zadruga organizations are not prepared either economically or with specialists and personnel. Really, they are not able to utilize the farmers' mood for association. One gets the impression that the zadruga organizations are not even sufficiently motivated to utilize that mood.

The lack of income relationships represents one of the greatest obstacles to the association of agricultural producers. The zadruga organizations are not able to set aside suitable income for the farmer. Agricultural producer delegates to various assemblies are not in positions to deal with the problems. We have carried on the struggle to have farmers become producers of goods, to build stock yards. Yet today there is not enough concentrate, so that these producers face enormous losses.

There is bureaucratism in the zadruga organization offices. There have been instances during stock sicknesses when specialists have not arrived for as much as 10 days. The livestock suffered and the producer suffered great losses. We have planted more wheat than we planned, but we did not fertilize it on time. We have received nitrogen fertilizer in small quantities. Those who have "connections" get it.

The farmers complain about various things. They are particularly worried by the lack of specialized personnel. In Bosanska Krajina, they say, there are many machines, which represent investments of billions. It would be good if they would also gather billions for personnel that would work in the village. The specialized services that occasionally visit the villagers are like travelling theaters; they come and they go. We should invest in village agronomists, provide them with apartments and automobiles. The farmers themselves say so.

In the Banat, one hears criticism of the "jack of all trades" farmer. They are expected to be producers of goods. A frequently repeated story is that the farmer is rich. Yet when the land is bought, then some directors and agricultural specialists have the advantage over the farmer: they are better supplied with semi-processed materials, fertilizers and pesticides. They also use zadruga machinery. Are they becoming rich in a legal way?

#### Cooperation as Commerce

Cooperation is still very thoroughly imbued with commercialism. When it comes time to pay accounts, it turns out that (as in the case of the Kovina cooperative) the coop has a profit of 60 million dinars, of which



40 million go to 20 people in the labor organization, while 20 million remain for all the other associated farmers!

A corn price of 8.5 dinars is by no means a stimulating price, for it will not cover the expenses. The nitrogen fertilizer plant at Pancevo cannot produce fertilizer if we do not help it cover its losses. So be it. But sugar has gone up in price, and the factories are showing surpluses. The farmer sold the factory 15 loads of sugar beets, will he get some money from that surplus profit? Nothing of the kind, for no income agreement was signed. Thus, the farmers say, they call us to cover losses, but they don't behave that way when they divide up the profits.

12131  
CSO: 2800/378

## INVESTMENT EXPENDITURES IN SERBIA, 1981

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 27 Apr 82 p 8

[Article by V. Subotic]

[Text] The growth of investment expenditures has been lower than the growth in social product. The share of economic investments amounts to 72.5 percent, compared to 68.6 percent for all of Yugoslavia. The rate of investment in agroindustry has intensified, while that in energy has slowed. Internal financing in Serbia proper, excluding the provinces, has grown.

In the past year, investment activities have been characterized by efforts to bring them into harmony with realistically available resources, to limit investments in noneconomic and nonproduction projects, and to use monetary credit and tax measures to give greater stimulation to priority investments. The difficulties are well known. Imports of equipment have declined by 8 percent, while the production of the means of labor has grown by only 3 percent. Along with that, according to the Federal Statistical Office, construction costs have risen by 38 percent. Thus, by the end of September last year, 538 fewer structures were registered than in the same month of 1980.

Total basic capital investments in the social sector amounted to 118,234 million dinars, or 22 percent more than in 1980. In the second half of the year, because of the increase in new investments, but not more rapid payment for projects begun earlier, the dynamics of paying for investments were somewhat more rapid. That is not in accord with the general social efforts to bring the total of investments into more realistic limits. If along with all of this we keep in mind that, beginning in July, a new tax on investments was imposed, we can say that the actual payment dynamics amounted to 18 percent less, compared to an average growth of about 32 percent in the previous 5-year period.

That means that investment expenditures last year, after discounting price growth, were about 12 percent lower in real terms. In the same way, their share of total social product has been declining constantly, from 1979 when they accounted for 36.5 percent, to 1980 with 32.1 and last year with

28.1 percent. The relatively slower growth in investment expenditures had a negative impact on the tempo of project completion, for on the basis of the ratio between precalculated values and final payments, the time required for project completion gradually lengthened, especially for priority projects and apartment construction.

Payments for investments in Serbia proper accounted for 22.5 percent of all Yugoslav payments. The growth of these payments on the average was faster than for the country as a whole. The payment index for investments last year compared to 1980 for the entire country was 117.8; for Bosnia and Hercegovina it was 124.7, for Montenegro, 135.7, for Croatia, 115.6, for Macedonia, 114.9, for Slovenia, 111.6, and for Serbia, 117.6. For Serbia proper, the index was 122, for Kosovo, 102.8 and for Vojvodina, 113.7.

#### Economic Investment Growth

Since the Resolution for 1981 foresaw much more extensive decreases of noneconomic investments than of those in economic pursuits, the Law provided for more stringent conditions for investments in noneconomic projects, along with stimulative measures for investments in certain economic activities. These factors had a positive reflection in the economic structure of payments for investments. Thus, growth came in the share of economic investments: in 1979 it was 70.9, in 1980, 70.9, and in 1981, it reached 72.5 percent. Meanwhile, the share of noneconomic investments fell from 27.5 in 1979 to 27.5 last year. Data on the actual economic structure of investments in Serbia proper indicate that it is more favorable than for Yugoslavia as a whole, with a 72.5 percent share for economic activities compared to 68.6 for the entire country.

For what purposes have investment payments been made?

Investments in economic projects have increased 25 percent, while for all of Yugoslavia they grew 18 percent. Fully half the total payments went for industry. In the precalculated value of investments in progress, industry has about 2/3 of the total, indicating that the intensity of payments for industrial investment projects has been weaker than for other investments.

#### More for Agriculture

In 11 industrial branches, investments were nominally smaller than in 1980, including nonmetals with a 14 percent drop, shipbuilding with a 37 percent decline, electrical devices and machines down 9 percent, sand and gravel down 2 percent, paper production and processing with a 241 percent decline, cloth and knitted goods down 14 percent, rubber processing down 32 percent, beverage production down 5, livestock feed down 37 percent, tobacco down 9 percent and various other products down 13 percent.

Within the economy, investments have increased in agriculture, construction, innkeeping and trades. Thus, last year a large number of small installations were begun, whose total precalculated value showed only a 3 percent increase, while the increase in payments was 39 percent, up 25 percent over 1980. This increased tempo of payments resulted from application of measures to stimulate investments in the agricultural complex. The construction industry also saw a high, 25 percent rate of increase, again because of more rapid payments, while innkeeping grew by 2.2 percent because of expanded investment volume.

Investment outside the economy showed a more moderate growth of 15 percent, which to a large degree resulted from measures undertaken to limit those investments. The fastest increase came in apartment construction, which is exempted from all constraints. Despite the fact that the number of construction projects grew by 20 percent and the precalculated value by 35 percent, payments increased by only 19 percent. This shows that a slowing has occurred in payments. Thus, in 1980 56 percent of the total precalculated value of projects was actually paid, while in 1981 that figure dropped to 49 percent. If we keep in mind the inflation of construction costs, it is clear that investments in apartment construction actually fell by 14 percent in real terms, so that the plan projections to maintain the same level of construction achieved in 1980 were not accomplished.

#### Lagging Completion of Priority Investment Projects

Investments of special importance were hastened by both legal measures and social agreements, so that the greatest growth came in that area. The index of payments for priority investments, which in 1978 was 120 in comparison to 1977, increased to 138 in 1981 compared to 1980. Last year, however, there was a markedly slower pace of completing priority projects than for nonpriority investments. Thus, of the precalculated value for priority investments of 243,890 million dinars, 45,841 million dinars were paid, while of 185,556 million dinars in nonpriority investments, 72,393 million dinars were paid. Among priority investments, the largest single category was for investments in raw material operations. Of the total 45,841 million invested in priority projects, 13,757 million dinars were invested in energy, 7,470 million in agroindustry, 13,863 million in producing raw materials and reprimaterials, 5,993 million in highways, and 4,748 million dinars in producing equipment, ships and other installations.

Investments in energy for several years have held first place according to value among priority investments, but their tempo has varied. In 1981 the contribution for energy through required resource pooling was increased, but that did not reflect favorably on investments, for the growth slowed. The index for investments in coal production fell to 97 in comparison with 1980, while investments in the agroindustrial complex rose to 136, with agricultural production reaching 139, sugar production 237, and production of vegetable oils, 286 compared to 1980.



In the spirit of plan provisions, the process of strengthening internal financing for investments was continued. Of a total 118,234 million dinars of investments, basic organizations of associated labor in the economy provided 41,600 million, basic organizations of associated labor from noneconomic activities, 13,131 million, self-management interest communities in social activities, 3,601 million, bank credits 55,831 million, placement through banks 2,015 million, and resources of sociopolitical communities amounted to 2,056 million dinars. The relatively greater investments from resources of economic activities resulted from greater transferred reproductive capacities from last year, increased percentages of direct participation in using credits for certain purposes, and taxes on investments.

12131

C SO: 2800/378

POSSIBILITIES, STATUS OF OIL RECYCLING DISCUSSED

Zagreb NAFTA in Serbo-Croatian, No 12, Dec 81 pp 615-620

[Article by Nevenka Adler, graduate chemical engineer, doctor of chemical technology, Technological School, Zagreb University; Boris Prohaska, graduate chemical engineer, doctor of chemical sciences, research and development group, INA oil company, Zagreb; Vlasta Cizmic, graduate technical engineer, master of technical sciences, research and development service, INA oil company refinery, Zagreb; Ervin Adler, graduate chemical engineer, Industrial Project Institute, Zagreb; and Berman Yabar Mejia, graduate technical engineer, master of technical sciences, Lima, Peru]

This work was first presented at the "Symposium on the Technology of Processing Oil and Natural Gas in Fuels and Basic Petrochemicals," held in Zadar 24-26 March 1980.

[Text] The work includes brief presentations on modern processes for regeneration of used oils.

It is estimated that in Yugoslavia about 150,000 Mg/year of used oil could be collected in 1985, in contrast to the total installed capacity for reprocessing used oil of 55,000 Mg/year. Currently only 36 percent of that capacity is being used. It is proposed that the social community should develop systematic processes to support the collection of used oils and their re-refining, since this could lead to better protection of the environment and reduction in oil imports.

Using the example of the acid-clay process with a capacity of 10,000 Mg/year, the economic effects of refining used oil are studied. Application of static and dynamic investment evaluation criteria show that this conservation process with relatively low capacity is on the margin of economic feasibility. From this it follows that investing in re-refining processes for lubricating oils has a sound economic basis.

#### Introduction

One of the most important problems currently attracting the interest of humanity is the uncontrolled way in which primary raw materials are being exploited, and the ecological consequences of high levels of industrialization caused by the great demographic explosion and the high standard of living.

On the one hand, development has brought progress and benefit to humankind, while on the other hand it has caused many undesirable consequences, which are tightly bound to that industrial phenomenon.

Nature with all its wealth and its great regenerating ability becomes daily more seriously threatened because of irresponsible exploitation, transport and utilization of today's most important and most used energy resource, crude oil.

The most common environmental polluter is used oil that is discarded after use. The proper solution to this problem is regeneration of used oil.

In the past few years interest for regenerating and adequate treatment of used oil has grown not only because of stricter criteria for controlling pollution of the human environment, but also because used oil can serve as a raw material to replace ever more expensive crude oil in the production of lubricating oil through regeneration.

In the past few years the interest for regenerating and adequate treatment of used oil has grown, both because of stricter criteria for controlling pollution of the human environment, and because of the fact that used oils can serve as raw material in place of ever more expensive petroleum in the production of lubricating oils through regeneration.

In industrialized countries, about 2 percent of the total amount of refined petroleum goes into mineral oil. Of the total amount of mineral oils used, 50 percent remain as waste oils and the other 50 percent are lost in various ways, including use as fuel for high furnaces and as oil on roads for preventing dust, or simply through disposal into sewer systems.

In the past 10 years, consumption of mineral oils in Yugoslavia has risen by about 7 percent per year. The reason for that is to be found in the growing standard of living and in the rapid increase in the number of motor vehicles connected to growing living standards.

In 1975, 1,537,000 passenger cars were registered in Yugoslavia, with a growth trend at 22.9 percent; there were also 254,000 buses, trucks, and other specialized vehicles with a growth rate of 10 percent.

According to analyses of the INA Refinery in Zagreb, it is projected that growth in lubricating oil consumption will continue at a reduced rate of about 4 percent per year. In that case, it could be expected that in 1985, consumption of mineral lubricating oils would be about 317,000 Mg.

Keeping in mind the estimate that the amount of used oil available for regeneration is about 50 percent of the total amount of mineral oil, we can expect that in 1985 there will be about 158,500 Mg of used oil available.

The regenerating or re-refining process is defined as the elimination of undesirable components from used or waste mineral lubricating oils with the intention of recovering lubricating oil of a quality equivalent to that obtained in original production from petroleum.

#### The Technological Process

##### 1. The acid-clay procedure

This procedure consists of the following phases:

- separation of the gathered waste oil
- removal of hydrates
- refining
- distillation

##### 2. The IFP [French Petroleum Institute] Selectopropane Procedure

The French Petroleum Institute has provided an innovation that consists of extraction using propane before conventional treatment with sulfuric acid.

The IFP process reduces the amount of sulfuric acid and clay, and improves the oxidation stability of the regenerated oil while reducing the ash content.

##### 3. The IFP Selectopropane-Hydrofinishing Procedure

The technological phases of this procedure are:

- predistillation
- treatment with lime
- propane extraction
- hydrofinishing, or treatment with hydrogen
- clay treatment
- fraction distillation

##### 4. The BERC [Bartlesville Energy Research Center, Department of Energy] Procedure

This process consists of six phases:

- removal of hydrates
- treatment for dissolving and sedimentation
- removal of solvents
- fraction vacuum distillation
- bleaching and deodorization
- final processing



## Regeneration Facilities in Yugoslavia

There are industrial waste oil regeneration facilities in Yugoslavia. In 1947, the Maribor refinery went into operation; in 1972 that plant installed a new facility with 10,000 Mg/year capacity. Today, however, the facility is working at reduced capacity.

The Zagreb refinery also has a facility for processing 10,000 Mg/year of waste oil but it has been closed down because of low available quantities of used oil.

The Modrica refinery was built in 1969, with a processing capacity of 10,000 Mg/year. In contrast to the two refineries mentioned above, Modrica is using 80 percent of its capacity, and today, considering the higher purchase price for waste oil, it is expected that 100 percent of its capacity will soon be in use. In 1978, a new waste oil facility was built at the Belgrade refinery, with a capacity of 25,000 Mg/year.

The waste oil regenerating facilities at Zagreb, Modrica and Maribor use a sulfuric acid process. Such facilities are cheaper to build, but they often break down during operations because of corrosion in the facilities caused by the sulfuric acid. Furthermore, their basic oil product is of poorer quality. The Belgrade regeneration facility works on the principle of propane deasphaltization and lime refining. This technology is more expensive, but it provides higher quality basic oil fractions.

Hence the total installed capacity in Yugoslavia is 55,000 Mg/year, which actually is processing only 20,000 Mg of waste oil per year. In Europe, 50 percent of total oil production is collected and reprocessed. In 1979 127,200 Mg of motor oil and about 70,000 Mg of industrial oil were sold in Yugoslavia. Experience in the West shows that it is possible to collect and reprocess as much as 70 percent of the available quantities of waste oil, which in Yugoslavia would mean about 70,000 Mg of waste oil. From those quantities it would be possible to obtain about 50,000 Mg of regenerated oil, which would represent a significant savings for society.

## Conclusion

Of the procedures described for regenerating waste oil, the most appropriate from the ecological standpoint are the IFP selectopropane-hydrofinishing process and the BERC process. Both of these procedures have eliminated sulfuric acid, the quantity of active clay has been reduced, they make possible processing of used mineral oils with higher content of asphalt residues and additives, and the resulting products are of suitable quality.

Static criteria for investments in facilities for re-refining mineral waste oils through acid-clay processes are insufficient for determining their feasibility. A return of 6.7 percent, an economic coefficient

of 1.13 and an investment return period of 5.7 years indicate that investments in facilities for re-refining waste oils are only marginally feasible from a financial standpoint.

The contribution of the social community to solving the problem of polluting the environment with waste oils should be to support the collection of waste oils at higher prices and to assure credits under favorable conditions for investment projects connected to re-refining waste oils, as well as to exempt producers of waste oil products from social contributions.

#### BIBLIOGRAPHY

1. Skerlev, P. and Velebir, K., NAFTA No 29, 1978, p. 24.
2. anonymous, Documentation of the WUFAG OERURNER-Switzerland Company for the Construction of a 10,000 Mg/year Waste Oil Re-Refining Facility.
3. Dutriau, R. and VU Quang, D. CHEMICAL ENGINEERING, Vol 79, No 4, 1972, p 54.
4. Audibert, F., REVUE DE L'INSTITUT FRANCAIS DE PETROLE, Vol 33, No 10, 1978, p 141.
5. Whisman, M.L., Reynolds, J.W., Goetzinger, J.W., Gotton, F.O. and Brinkman, D.W., HYDROCARBON PROCESSING Vol 55, No 10, 1978 p 141.
6. Lalic, D. KEMIJA U INDUSTRIJI, No 3, 1975 pp 115-119.
7. Chauvel, A., Leprince, P., Barthel, Y., Rimbault, C., and Arlie, P. MANUEL D'EVALUATION ECONOMIQUE DES PROCEDES, Editions Technip, Paris, 1976, pp 56-71.

280

12131

CSO: 2800/383

END

**END OF**

**FICHE**

**DATE FILMED**

June 7, 1982

